UC-NRLF
B 4 185 777

LIBRARY
OF THE
UNIVERSITY OF CALIFORNIA.

Class

EDUC.
LIBRARY

THE SIXTH YEARBOOK

OF THE

NATIONAL SOCIETY FOR THE SCIENTIFIC STUDY OF EDUCATION

PART I

VOCATIONAL STUDIES FOR COLLEGE ENTRANCE

Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

THIS YEARBOOK WILL BE DISCUSSED ON WEDNESDAY, FEBRUARY 25, AT 4-00 O'CLOCK P.M., IN THE AUDITORIUM HOTEL CHICAGO, ILLINOIS

CHICAGO
THE UNIVERSITY OF CHICAGO PRESS

http://www.archive.org/details/vocationalstudie00herrrich

THE SIXTH YEARBOOK

OF THE

NATIONAL SOCIETY FOR THE SCIENTIFIC STUDY OF EDUCATION

PART I

VOCATIONAL STUDIES FOR COLLEGE ENTRANCE

BY

CHEESMAN A. HERRICK,
Director of the School of Commerce, Central High School, Philadelphia, Pa.

HENRY W. HOLMES,
Head Teacher of English, Boston High School of Commerce

THEODORE DE LAGUNA,
Assistant Professor of Education, University of Michigan

VIRGIL PRETTYMAN,
Principal of Horace Mann High School, Teachers College, New York City

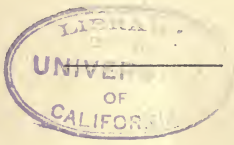
W. J. S. BRYAN,
Principal of Central High School, St. Louis, Mo.

acc.

EDITED BY

MANFRED J. HOLMES
Illinois State Normal University
SECRETARY OF THE SOCIETY

THE SUBJECT OF THIS YEARBOOK WILL BE DISCUSSED WEDNESDAY, FEBRUARY 27 1907, AT 4:00 O'CLOCK P. M., IN THE AUDITORIUM HOTEL, CHICAGO, ILLINOIS



CHICAGO
THE UNIVERSITY OF CHICAGO PRESS
1907

LBS
N2
Ser 2
V.6-7
EDUC.
LIBRARY

COPYRIGHT 1907 BY
MANFRED J. HOLMES
SECRETARY OF THE SOCIETY

Published February, 1907

Composed and Printed By
The University of Chicago Press
Chicago, Illinois, U. S. A.

OFFICERS AND EXECUTIVE COMMITTEE

REUBEN POST HALLECK,
Boys' High School, Louisville, Ky.
President

C. P. CARY,
State Superintendent, Madison, Wis.

JAMES H. VAN SICKLE,
Superintendent of Schools, Baltimore, Md.

STRATTON D. BROOKS,
Superintendent of Schools, Boston, Mass.

W. S. SUTTON,
University of Texas, Austin, Texas

MANFRED J. HOLMES,
Illinois State Normal University, Normal, Ill.
Secretary-Treasurer
and
Editor of Yearbook

164797

COMMITTEE ON VOCATIONAL STUDIES FOR COLLEGE ENTRANCE CREDIT

CHEESMAN A. HERRICK,
Director of School of Commerce, Central High School, Philadelphia,
Chairman

PAUL H. HANUS,
Professor of Education, Harvard University

VIRGIL PRETTYMAN,
Principal Horace Mann High School, Teachers College, Columbia University

A. S. WHITNEY,
Professor of Education, University of Michigan

W. J. S. BRYAN,
Principal Central High School, St. Louis

TABLE OF CONTENTS

PAGE

I. VOCATIONAL SUBJECTS FOR COLLEGE ENTRANCE REQUIREMENTS—*Cheesman A. Herrick* 7

College Entrance Requirements: A Look Backward . . 7
Relations of the College and the School 9
The Ends of College Entrance Tests 10
Aims of Secondary Education 12
The Obligation of the College 14

II. EDUCATION VERSUS COLLEGE ENTRANCE REQUIREMENTS—*Henry W. Holmes* 16

Duty of the College to the State 16
Duty of the College to the Individual 17
Influence of the Colleges upon the Schools 18
Attitude of the College toward the Vocational School . . 19
Aims of Secondary Education 21
How the Aims of Secondary Education Shall Be Realized . 23
Effect of College Requirements on the Choice of High School Subjects 24
Eight Divisions of Secondary School Subjects . . . 25
Test of Educational Values 26
Fair Requirement for Entrance to College 28
Nature of College Entrance Examinations 29
Effect of College Requirements on High School Teaching . 31
Present Practice in College Admission 31
Evils of the Present Practice 35

III. VOCATIONAL STUDIES FOR COLLEGE ENTRANCE REQUIREMENTS.—*Theodore de Laguna* 36

Timeliness of This Discussion 36
An Apparent Inconsistency—Its Sources 36
High Schools as Preparatory Schools 37
Exceptional Position of the Vocational Studies . . . 39
Claim of High Schools to Independence 39
Vocational Studies not Excluded by College Preparation . 40
Recognized Value of the Vocational Studies . . . 42

PAGE

Their Characteristic Defect 43
Relation of the College to Vocational Study . . . 44
Relation of the Present Problem to That of the Baccalaureate Degree 45
Conclusion 48

IV. Vocational Studies for College Entrance Requirements.—*Principal Virgil Prettyman* 50
Definition of Terms 50
What College Entrance Requirements Signify . . . 50
Entrance Requirements at Present Are One-Sided . . 52
Present Limited Recognition of Vocational Subjects . . 53
Enlarged Usefulness of the College and How Realized . . 55

V. College Entrance Credits for Vocational Subjects.—*W. J. S. Bryan* 57
Introduction—the Situation 57
Secondary Education in Its Relation to Elementary and Higher 58
Determination of Standards for Admission to College . . 58
Present Status of Vocational Studies for College Entrance Credit 60
What Credit-Value Should Be Assigned Vocational Subjects? 61

Report of the Secretary 64
I. Minutes of Meetings Held at Louisville, Ky., Feb. 26 and 28, 1906 64
II. Status and Prospectus of the National Society . . 68
III. Announcements to Active Members 72
IV. Financial Statement 74

Active Members of the National Society for the Scientific Study of Education 75

UNIVERSITY OF CALIFORNIA

THE SIXTH YEARBOOK

I

VOCATIONAL SUBJECTS FOR COLLEGE ENTRANCE REQUIREMENTS

CHEESMAN A. HERRICK
Director School of Commerce, Central High School, Philadelphia

COLLEGE ENTRANCE REQUIREMENTS: A LOOK BACKWARD

Progress in dealing with college entrance requirements for a hundred years should be to the student of education a cure for pessimism. Down to 1807 the standard requirements were Latin, Greek, and arithmetic, but in that year geography was added to the list, and later English grammar, algebra, geometry, and ancient history were included. The teaching of astronomy in college and school led to a recognition of this subject and finally in the first half of the period a general treatise on the physical and chemical sciences under the title of natural philosophy was also accepted.[1] Marked interest in the study of the natural sciences and the modern languages in the third quarter of the nineteenth century led to a recognition of these subjects as deserving a place in the studies for college admission.

The most valuable single discussion of secondary studies yet made was that by the conferences arranged through the Committee of Ten which conferences covered the general field of secondary work and gave us a valuable statement of educational values of subjects to be studied in secondary schools and somewhat of how these values can be realized. Probably no single piece of work has done so much to unify and correlate secondary education as has the famous report of the Committee of Ten. In 1899 a further committee on college admissions submitted a report to the National Educational Association which supplemented the report of the Com-

[1] Brown, *The Making of Our Middle Schools.*

mittee of Ten and formulated courses of study with more thought of their satisfying the requirements for college admission.

In the reports mentioned above there is clear evidence of the dominance of the college influence. But parallel with the movement that is evidenced in these reports there has been a marked growth of interest in more practical subjects of study that originally came from outside the sacred circle of college entrance studies. These subjects are now asking for recognition along with others which seek to prepare for study in higher institutions. The first marked tendency for vocational education in the secondary schools was the outcome of the Centennial Exhibition of 1876.

The striking results of European manual training schools were there represented in foreign educational exhibits. There was also embodied in the exhibits of the American states the material achievements of a hundred years. These two object lessons gave the impulse for a new educational propaganda, expressed in the motto: "Send the whole boy to school." Many of us remember the bitter controversy over manual training in the eighties, the attempts to discredit it by those high in educational influence, but we also note that manual training has steadily gained ground, that it is now recognized practically everywhere as sound educationally, and it has reached such a stage in development that it can reasonably request the higher institution more to generally recognize its educational worth by having it included in the list of subjects for which college admission is granted.

In the early eighties there began in a crude way the introduction of commercial studies in public and private high schools. The impulse for such an innovation was the competition of the private business school and the demand of communities that our secondary schools should not only give a good education but one also that is good for something. At first these commercial courses were abbreviated as to time and impoverished in curricula, but by lengthening them so that they are equal in time requirements with other courses of a similar grade and enriching them with more practical interpretations of older studies, and the introduction of new subject-matter in the way of applied economics and technical business subjects these commercial schools have been improved until they may fairly claim a place educationally with the other forms of high-school

education and they, as well as manual training, are making demands upon higher institutions for the admission of their students.

Lastly there is beginning to be felt the demand of special education for women. The pressure for recognition of domestic science or home economics courses may still be in the future, but it is as inevitable that the demand for these courses will be made as it is that they will become a recognized part of our education for girls.

RELATIONS OF THE COLLEGE AND THE SCHOOL

Undue credit for the influence of the college on the school has been assumed by the college authorities. The high school, as has been pointed out by the recognized authority on the history of these schools, was originally the extension upwards of the elementary school, and its policies have been formulated by the educational forces below it and by the demands of the community outside of the school as well as by the insistence of the college authorities upon a certain requirement for admission. The Committee of Ten termed the proportion of secondary pupils going to college as insignificant, but more striking than this is the fact that despite the pressure of the colleges, the pupils in the distinctively preparatory courses have not increased relatively with the increase of those not perparing for college. This statement is true for both public and private schools. In 1892–93 the percentage of those preparing for college in public high schools was 14.6. Eleven years later the percentage of those so preparing in the same schools was 9.54. In the private schools for the same period the percentage had fallen from 26.5 to 21.47[2]

The seventh question propounded for the several conferences in connection with the Committee of Ten's report was: Shall subjects be taught differently to pupils who are going to colleges, to those who are going to a scientific school, and to those who presumably will not enter upon higher studies? In the letter of transmission the Committee says that this question was answered unanimously in the negative. The answer to this question, however, provoked much discussion and called forth dissent. For instance, one writer attempted to show that the question was answered with-

[2] Brown, *The Making of Our Middle Schools*, p. 418; *Report of U. S. Commissioner of Education, 1904*, Vol. I, pp. xvii, xviii.

out being understood.[3] The interpretation has been made that those who answered meant to say that college preparatory work is the best work that could be furnished in the secondary schools and there is still a general opinion for which no doubt the college influence is responsible, that the best education which can be given in the schools is of the traditional college entrance type and that as many as possible of the pupils should be led to take this kind of education even though they do not go to college. We shall no doubt ultimately come to an acceptance of the unanimous answer of the Committee of Ten's conferences though perhaps not in the way all the conference meant the answer, certainly not in the way that some have interpreted both the question and the answer. But we shall accept it rather as a statement of the idea that the business of the school is to furnish education and that it should devote itself to this business for all who come to it for instruction regardless of their ultimate destination being attendance at a college.

THE ENDS OF COLLEGE ENTRANCE TESTS

We may well ask the question of Mr. Prettyman's paper in the following collection, do college entrance requirements signify subjects or power? If subjects there is little to be said, but if power then vocational education is entitled to a hearing. And let us also remember that power is to be expressed in feeling and action as well as in thought. One claim of practical studies worthy of consideration is that they relate thought to action. In formulating and enforcing the entrance requirement due regard should be given to the quality and temper of students, their attitude and capacity; if this be not so the colleges will be taking the symbol for the thing symbolized, the form for the spirit. Some of us cannot get away from the conclusion that what the colleges should ask is not a particular "brand" of knowledge but the evidence of maturity of mind and seriousness of purpose on the part of those who seek admission.

Miss Mary E. Haskell in a recent investigation of examinations for non-college going girls was led into a consideration of the training of the girls who go and those who do not go to college. The conclusion was inevitable that there should be less difference than there now is in the treatment of these two classes of pupils. The sug-

[3] Butler, *Educational Review*, December, 1896.

gested way to secure uniformity is also as we might have expected. It is by giving less of college entrance education and more of education. Miss Haskell reports that in her correspondence with schools fitting for college she found a very general evidence of the feeling that college entrance requirements could be modified with gains to the pupils going to college and she reaches the conclusion, "we feel so much certain hamperings over our work with the college preparatory girls that we are very desirous, for their sakes as well as for the larger body of girls who do not go to college, that a modification should be brought about in the college entrance requirements." [4]

The suggestion of Professor de Laguna's paper which follows appears a fair way out of the present difficulty when taken in connection with the admission requirements of the University of Michigan. But these requirements differ widely from the practice in general, and particularly so from that in the East. The attempt to follow both general and vocational studies at one time is almost sure to lead to overloading the curriculum which will result in lowering the educational results for all the studies. As the requirements for college admission are now pretty generally enforced it is only the student of special ability in the vocational schools that is able to secure admission for advanced study, or he secures this admission with a heavy disability because of conditions. Harvard's entrance requirements themselves stagger the average student in the secondary school and put him to the test of his best endeavor for four years without any side issues by way of vocational subjects.

The present differences between the practices of the East and the Middle West are fairly shown by comparing the demands made in the paper of Mr. Holmes with the entrance requirements of the University of Michigan as set forth by Professor de Laguna. May it not be that the liberalizing of entrance requirements with the recognition of more modern and more practical studies will come from the democratic community institutions of the Middle West and that the institutions in other sections of the country will be led to an acceptance of the practice after its workings have been demonstrated. We may grant the validity of Professor de Laguna's argu-

[4] *School Review,* December, 1906.

ment but his premises lay an obligation for a very general modification in our practices with regard to college admission in the country at large.

AIMS OF SECONDARY EDUCATION

In any discussion of secondary education or college admissions we should keep clearly before us the threefold purposes of the middle schools as they have been set forth by the present United States Commissioner of Education. These purposes are: first, a better adjustment of the middle schools to the schools that are above and below them; second, a better adjustment of these schools to the capacities of their students; and third, a better adjustment of them to the changing needs of our societies. We may, I think, raise the reasonable question whether the first part of the first aim has not exercised an undue influence over the secondary schools. Some years ago a university president, speaking to a company of schoolmen declared that a system of education should be like a pyramid which all the way down takes its shape and its proportions from the apex. His suggested apex is the university, but we are coming to believe that the stone at the apex is to be influenced by the foundations and the other parts of the structure and is not to give its own shape and direction to the whole. Elementary school, middle school, and higher school should find a harmonious balance one with the other and all must be influenced by, as they should in turn influence, our civilization; and finally we cannot emphasize too strongly that schools and courses, college entrance requirements and vocational studies exist for pupils and not pupils for them.

There will be general approval of the Committee of Ten's declaration that secondary schools are not primarily for the preparation of students to pass special examinations for college admission. Instead, their chief purpose should be to prepare girls and boys for the duties of life. The Committee was direct in the statement that the preparation of students for colleges and scientific schools should be for the average secondary school an incidental and not the main object, but the report recognizes the logical deduction from this fact and passes on to say: "It is obviously desirable that the college and the scientific school should be accessible to all boys or girls who have completed creditably the secondary school course." If this were not

true, then early in the life of the child his educational future, probable destination, and sphere in life are fixed for him and fixed in an accidental and arbitrary manner without taking his own traits and predilections into consideration. There can be no gainsaying that any successful graduate of a secondary school should be eligible for studies in our higher institutions of learning "no matter what group of subjects he may have mainly devoted himself to in the secondary schools."

This was the doctrine of the Committee of Ten's report and by this doctrine we should stand. The natural outcome of the acceptance of this course is to make our vocational schools and courses of true educational worth equal in time and corresponding in the demands which they make with the other forms of secondary education.

Education may set for itself such ideals as the cultivation of intellectual power, and, what is more difficult, the acquisition of the ability to apply power to the matter in hand. If our curricula were made in accordance with these principles, the training of secondary schools will render the double service of making subjects of instruction more practical, and practical affairs more intellectual. We have long had two educational ideals that have existed side by side, but have not intermingled; these are the academic and the apprenticeship. The former earlier gave scholasticism, the classical school; the latter, utilitarianism in education, the workshop. But the old division of studies into educational but not useful, and useful but not educational, is fast disappearing. The useful is found to be intellectual, and much that was hitherto thought to have educational interest only has been shown to have increasing usefulness. At present, three sets of interests at least make demands upon the secondary schools. These are professional or literary, industrial, and commercial. If the demands of these are rationally met and if high schools are properly co-ordinated with the elementary school on the one hand and the universities on the other, we shall have realized somewhat Huxley's ideal of an educational ladder reaching from the primary school to the university. Let this ladder be wide enough to accommodate all who want to ascend it, and let the meaning and the probable rewards of ascent be such that a larger number will want to go up. Practical schools and courses will add to the

number who go through the secondary schools, and this in turn may be made the means of increasing the number who go to higher institutions.

THE OBLIGATION OF THE COLLEGE

The college cannot afford to be an institution apart from the modern school. Our present United States Commissioner of Education has emphasized the thought that our secondary education is indigenous, an expression of the social life of the American people. The number and character of secondary schools is a reflex of our civilization; public high schools are peculiarly the institutions of the people. In several senses these schools are middle schools, but most important they are the meeting place for various classes of our democratic society. Here classes may mingle and learn each of the other.

Certain fundamentals are coming to pass almost by common consent in our educational creed. One of these is that the school is one form of activity in the present social order—society expressing itself in a given way; and another that it is the business of the school to induct men into institutional life, not of the remote past, but of the present. This means of course that we are to treasure and stimulate interest in our historic civilization, but the latter is not the sole, not indeed the chief, purpose of education. More than any other institution the college has set itself aside from modern society both in its own work and in the requirements it fixes for admission. In consequence the college is losing its opportunity to render the largest service both in preserving the traditions of culture and in leavening the whole lump of modern society.

With certain rather cynical remarks made of late that we do not need more students going to college, that there may be too many now taking the higher education, etc., we should have little patience. Of purposeless educational dilettanteism we cannot have too little, and this is one of the results of the traditional college entrance test and a higher education that leads nowhither; of that definite education that relates the training given and the life to be led we cannot have too much, and this is the result of the vocational aims of education. The college owes a debt to society that up to this time it has come far short of paying; more narrowly the college owes some-

thing by way of recognition and inspiration to the secondary institutions that seek to serve community needs. The college owes recognition to that boy or girl who after worthily completing the studies of the vocational school asks for the privilege of further education.

When colleges and universities widen their system of credits or entrance requirements, and touch the schools at more points, the questions of dealing justly with the vocational schools and their students will settle itself. As the instruction within the university is modernized, it becomes easier to recognize modern subjects in the secondary schools. Would not a proper course for the higher institutions be, not to refuse to consider the newer subjects of the vocational school, but by rigid insistance on meritorious work in them help to make these subjects of greater value to those who do and to those who do not wish to go to college?

But of all things most to be desired, let those in the schools escape from the bugaboo of getting into college in a particular way. The boy fitted for getting into life ought not to be thereby incapacitated for getting into college, and if he is, there is something wrong with the college requirements. First let there be schools giving real education—classical, English, manual training, and commercial, and then let the colleges welcome students from any and all of these schools. It is manifestly unfair to compel all students to take a special course for college admission when a small portion go to college; it would be just as unfair to deny college admission to those who have not taken the required course, but who find that at the close of their high-school work that they have the inclination to go to college and that a way has opened for them to do so.

II

EDUCATION VERSUS COLLEGE ENTRANCE REQUIREMENTS

HENRY W. HOLMES
Head Teacher of English, High School of Commerce, Boston, Mass.

DUTY OF THE COLLEGE TO THE STATE

Democracy has not yet revealed its full meaning. The grounds of the democratic faith lie too deep to be patent; with every fresh study of them comes new insight into their profundity, and with every attempted application a new conception of their logical effects. We have recently seen the insurance companies taught the lesson of democratic responsibility; the railroads and the packers are studying the same text; and it would seem that holders of colossal fortunes may soon be forced to think carefully about the nature of private property in a democratic society. "Mutualization" is a sign of the times, pointing into untraveled depths of democratic theory.

Education is not exempt from this new activity of republican thought. A highly suggestive study of republican principles bases them upon a conception of man as a free spiritual agent, whose true life is in his main spiritual relations.[1] Among many consequences, dimly seen, of such a conception, there is one, at least, which will be clear to the educator; a democratic society owes to each of the individuals which compose it *all* the education, and *that sort* of education for which as a free spiritual agent in the relation of citizen he has the capacity and the need. This deduction, familiar to many of us as it may be, is far enough from the popular idea of the educational duty of the democratic state to prove that democracy has revelations yet in store.

But in America the democratic faith is strong. Self-government has proved to be only a primary duty. We early inaugurated elementary education, free to all and for all alike the best obtainable.

[1] Joseph Lee, *Charity and Democracy,* Charities and the Commons, xvii. 9, Dec. '06, p. 392.

UNIVERSITY OF CALIFORNIA

The free public high school is now firmly established, and public sentiment is quick to support the new schools designed to meet special educational needs. Some states offer free collegiate courses, including, besides traditional liberal culture, professional training of university grade. The democratic faith, strongest in educators, may yet lead us to demand of every commonwealth the fulfillment of its whole educational duty;—free higher education, both general and vocational, may yet be universally offered. Be this as it may—it would lead us far afield were we to discuss all that the state may here properly undertake—we may with some confidence appeal to the educator as democrat in favor of a thesis concerning the admission requirements of the college in a democracy. For the educator as democrat will at least recognize the responsibility of the college to the community. He may not be ready to argue for free university instruction, much less for free law schools, but he will admit that the college, like the railroad and the insurance company, should serve the whole public fairly and without respect to persons. He will agree that the college should try to meet every reasonable need of the community it serves. He will agree that it should be quick to recognize a worthy educational demand. In the light of this responsibility to the community, the contention we shall here maintain will not seem overdrawn: college requirements must not operate to debar from higher education any class which has received a secondary education adequate in its grade as a preparation for citizenship.

DUTY OF THE COLLEGE TO THE INDIVIDUAL

But education is Janus-faced; it looks both to the state and to the individual. Not only has the college a responsibility to the community; it has also a responsibility to the possible pre-collegiate instruction of every educable person. To education as a vital personal process that is, the college owes a duty. The college must guard the American principle of equality of opportunity. Class education is rightly, in America, abhorrent. We say to the humblest, "What is open to any, shall be open to you." We have gone far towards providing, at public expense, for the poorest, all that the richest can buy. In this light, college entrance examinations should not be a gate to which only the elect are given the key, but should rather

be a ladder, which all who are strong enough may climb. For education cannot properly be represented by any closed series of parts; it is not properly divisible into one kind which ends at 14, another which ends at 18, and another which ends at 22. The German idea of a kind of schooling, complete at a certain stage, to which each member of a class is foredoomed, is forever impossible in America. We hold education to be an open sea, upon which everyone may sail as far as the winds of his fortune will carry him; or, we look upon it, rather, as a single vital process, the whole virtue of which is the birthright of every citizen. It may be that he will be forced to sell it for a mess of pottage; but in any case it must not be denied him, even in part, while he is still ready to accept it. The whole process, let us note, is his birthright; if he has passed to proper purpose through one stage of it, the next should lie ready to his efforts. As teachers, surely, we should be loth to narrow the path of the pupil, to obstruct it, to turn it whither the pupil can not travel while he has still the will to go forward, or to exact of him a toll he is not able to pay. Once more, from the point of view of the responsibility of the college for the previous training of the individual: college requirements must not operate to debar from higher education any individual who has received a secondary education adequate in its grade to his needs as a man.

INFLUENCE OF THE COLLEGES UPON THE SCHOOLS

Of course we have not the temerity to imply that those who frame college entrance requirements are unmindful of the responsibilities upon which we have dwelt. There seems, indeed, to be a general willingness on the part of the colleges to acknowledge their influence upon secondary school programs. In the conscious exercise of this influence the college authorities no doubt set before themselves the dual ideal of service to the whole community and of guardianship over the integrity of the educational process. So long as there was but one kind of secondary education, the problem was simple enough; but with the introduction of the elective principle complications arose in abundance. Now we have before us the spectacle of secondary schools of special vocational character and of general high schools whose programs are divided into courses constructed to meet special needs,—an ever increasing number of verti-

cal divisions (if the figure may be permitted) of secondary education. It is not this sort of division, of course, against which we have just been contending. College requirements have not created the special schools; they have not drawn the "vertical" lines of cleavage. But the special schools are here, and the college problem is no longer simple.

Fortunately, we shall not here be obliged to take sides upon the exact issue of our problem of electives; enough for the moment if we state our belief in the general principle of education according to needs. We are quite ready to agree that this vertical division should not be carried too far, that it should be guarded by consideration of the interests of the community on the one hand, and of the integrity of the educational process on the other; but if vertical divisions are thus carefully made, we cannot admit that the "horizontal" bar should be raised by external influence upon any of them. The dead stop upon the educational path of any pupil should be raised only at the limit of his capacity. But just here comes in the practical question. If college requirements do not accord with the training supplied in the vocational schools then the training in these schools is educationally a path into the desert. If colleges will not provide for the continuance of vocational education, they stop that education at eighteen. If vocational schools are not recognized, then our "vertical" division has in effect a "horizontal" bar placed upon it by the colleges. The problem of admission requirements can no longer be settled by preparing examinations in the classics and in mathematics.

ATTITUDE OF THE COLLEGE TOWARD THE VOCATIONAL SCHOOL

Our premises, of course, remain to be proved. It may be that we do not supply in our special schools a training adequate as a preparation for citizenship; it may be that our training is too narrow for the needs of the individual as a man, as a free spiritual agent. Let not this obscure the point in question. We assert that our training is thus adequate, upon both counts. The colleges must meet us upon our own ground. If a college will confess that it accepts only intending divinity students, it may narrow its requirements as it pleases, with injury only to itself and to the divinity students. But if a college pretends to supply higher education of a

liberal character; if it is prepared to send its graduates into every activity of modern life; if it is, in short, a true American college; then it must fit its requirements to every proper function of American secondary education. Its requirements then become an authoritative definition of the functions of secondary education. If it will not accept graduates of vocational schools, it asserts that our training is class training. We reply that the refusal of the college to accept graduates of certain forms of high schools convicts the college itself of class training. Either these schools are too narrow, or the college is. If we claim for pupils of the vocational schools the right to continue their studies in college, the colleges cannot deny them that right by reason of special requirements for admission, without taking a stand against our form of secondary education.

Let us suppose, for example, that a graduate of the Boston High School of Commerce finds that he cannot enter X college. What is he to think? He may believe that his training has not been adequate in its grade as a preparation for citizenship. In this case, the college is guarding the democracy against a class of citizens which, without proper preparation, would yet enter the life of the community under the authority of the college degree. The college must discourage an unjustified pretension to adequate training for the great relation of citizenship. Or, our graduate may believe that his training has not been adequate to his needs as a man. In this case, the college is guarding the integrity of education as a vital personal process. It must not admit to the opportunity of higher education a pupil who has not received a training for manhood. Or, our supposed graduate may take the other point of view. He may believe that the college wishes to serve the needs of only a single class in the community; he may look upon its narrow requirements as evidence that the college will not recognize all reasonable demands, from whatever class; he may feel that the college is forgetting its duty to a democratic society. He may believe, moreover, that the college refuses to recognize a worthy function of secondary education; that it casts a stigma upon a form of secondary training which has supplied in its grade all his needs as a man, as well as some of his needs as a worker; he may feel that the college is forgetting its duty to him as an individual. This is the issue.

AIMS OF SECONDARY EDUCATION

To support our graduate in one opinion or the other, let us ask ourselves first what the functions of secondary education are. Upon this point, let us admit, we can here do little but present our convictions as clearly and convincingly as possible, and state our authorities. If the exposition is attacked, the argument will demand volumes. For the present we must content ourselves with a broad, firm confession of faith. First, then, we accept Herbert Spencer's working definition of education as preparation for complete living. Following Professor Hanus of Harvard University, we define preparation as participation, and complete living as usefulness and happiness. Under the same authority[2] we define the special function of the secondary school as "comprising three classes of aims: namely, vocational aims, social aims, and culture aims." A modern secondary school should graduate pupils who can, *first,* earn their own livings; *second,* discharge their duties as citizens; *third,* participate in the refined pleasures of modern life. If there are other aims of secondary education which cannot be brought within the scope of this statement, we do not know of them. We believe that every widely accepted, *practical* formulation of the aims of secondary schools in America is implicit in this one. Philosophical refinements upon these conceptions may of course be made; but in the practical outcome we may rest our case upon these grounds. The youth whose training has been dominated by these aims has laid a foundation for usefulness and happiness.

Two phases of education as we have defined it may attract attention. It is presented as a training for *active* life, and as a training for *modern* life. Let it not be supposed, however, that we are pleading for a commercial ideal. The activities of modern life are legion. We are not attempting to formulate a philosophy of commercial secondary education any more than a philosophy of classical secondary education. Both can find an appropriate place under our definitions; we ask only the same grace for both and an equally cordial welcome at the college doors. For to us, it seems obvious that the classical school is as much a special school as the school of commerce or the school of mechanic arts. We would make the powers

[2] *A Modern School,* by Paul H. Hanus, Macmillan Co.: 1904, p. 16.

of the pupil "subservient to life's serious purposes," among which the purposes of the scholar rank high. But they are special purposes, comparable to those of the business man or those of the engineer. We applaud classical training as a preparation for divinity, for the law, or for other special activities in which it may be applied. But we deny that it is the sole form of liberal training; we deny, indeed, that in itself it is a form of liberal training at all. Neither do we contend that any form of vocational education is, as such, a form of liberal training. Any form of secondary instruction may at least lay the foundation of a liberal education, if it adequately subserves the three essential aims of a modern school. For these aims include both a liberal aspect of education and a special aspect of education. No man can be useful unless he is master of some form of activity in the life of his day. He cannot be prepared to earn his living, nor to serve the state, nor to participate in the refined pleasures of life, unless he is in some degree a specialist. He must have his own field to till; his own point of vantage; the ground, longed for of old by Archimedes, from which to move the world. Neither can he be truly an educated man without the liberal form of training. He may earn his own living, but he cannot be of wide usefulness, nor find high sources of happiness in life, unless he has laid the foundations of general culture. In our devotion to this ideal of general culture, we do not yield, despite our special aim, to the advocate of any form of secondary training whatsoever.

For practical purposes, then, we may say that the triple aim of secondary education may be subserved by putting into effect these two general aspects—the aspect of mastery in a serious activity of modern life, and the aspect of liberal culture. It would profit us little to enter now into a theoretic consideration of the exact relation of these aspects to vocational, social, and culture aims, or to the ideals of usefulness and of happiness. Those aims must dominate, those ideals must permeate, the work of a school which consciously endeavors to give effect to these two aspects of secondary education. The teachers in such a school will feel constantly the pressure of a double duty, that of preparing their pupils to do something well and to enter intelligently and helpfully into the life of their day. There is no hint here of the old ideal of cultured leisure, the *diagoge*

of the Greeks. A modern school prepares its pupils for active, modern life. But it does not disregard the ideal of general culture.

What, then, is general culture? It is the capacity to understand, appreciate, and react upon the resources and problems of modern civilization.[3] If anyone will have it that general culture is something else or something more than this, from him we must part company. We have made our confession of faith. The development of this capacity is the foundation aspect of secondary education as the vocational schools endeavor to supply it. With the other aspect, the mastery aspect, it completes secondary education as we believe the colleges should recognize it. If any school will put these two aspects of secondary education into effect, we claim for its graduates the right to go forward into the field of higher education without let or hindrance.

HOW THE AIMS OF SECONDARY EDUCATION SHALL BE REALIZED

To compass the application of these principles, what must the secondary school attempt? It must attempt three things. *First,* it must lay the foundations of general culture by giving to the pupil a thorough acquaintance with (*a*) the kinds of data, (*b*) the mental processes involved, (*c*) the ideals presented, and (*d*) the applications possible in *all the distinct main branches* of modern knowledge. In this provision we are contending for the foundation aspect of secondary education. We may as well at once confess, as later it will become apparent, that we do not hold any specific subject—unless the Mother Tongue be such—as essential to liberal culture. If any substantial scientific subject, for instance, is properly taught, it will give to the pupil the necessary acquaintance with the kind of data, the mental processes, the ideals and the applications involved in scientific study. Nor will our list of specific subjects include a subject, such as common geography, which comes properly within the field of elementary education; nor one, such as comparative philology, which is beyond the grasp of high school pupils. But, *second,* it must not waste the pupils' time in work which is not carried far enough to yield the acquaintance we have postulated as desirable; nor must it carry special work so far as to exclude acquaintance with any "great branch." Yet, *third,* it must offer to each pupil the opportunity to carry to a reasonable point of mastery

[3] Hanus, *op. cit.,* p. 26.

that special branch in which lie his dominant interests and powers. It can be seen that in thus giving effect to the two aspects of secondary education, that of foundation and that of mastery, the secondary school is fulfilling our conception of its particular function. Vocational, social, and culture aims are subserved; usefulness and happiness may be founded upon a training thus planned. No essential purpose of education, in other words, is ignored. We are willing, therefore, to present these principles as our educational *Institutio.* Upon it we profess to base our educational conduct. If our courses of study are the just application of our philosophy, the colleges must accept our graduates, or confound us in our heresies.

EFFECT OF COLLEGE REQUIREMENTS ON THE CHOICE OF HIGH SCHOOL SUBJECTS

But the effect of any philosophy may be perverted by practical misjudgments as to means. It is in the influence of college requirements upon the actual choice of secondary subjects that we find our grievance. How should our doctrines be applied; what actual application do we ask the colleges to meet? If the college authorities hold the formal discipline theory, their requirements would of course not fit our training. For it is hard to see how an acquaintance with all the main branches of knowledge can be gained from a study of a single, specific subject or groups of subjects, or how the dominant interests and powers of every pupil can be turned to account in a system which recognizes no mastery but mastery in the classics or in mathematics. It is like trying to get the varied virtue of a seven-course dinner by eating a great deal of the fillet of beef. But we must part company with the formal disciplinarians without further argument. We cannot accept their dogma as a basis for a rational system of secondary instruction. What virtue we find in it we shall be glad to acknowledge, but we hope that its advocates grow ever fewer and fewer.

Other college influences upon the choice of secondary studies we must hold to be equally fatal, if based upon a less pernicious doctrine. There are sins of omission as well as sins of commission. College authorities may frame their requirements without regard to three principles which may be easily deduced from our theory of secondary training. *First,* they may not require examinations in every branch

essential to the foundation aspect of culture. *Second,* they may not offer advanced examinations in subjects in which many pupils may reasonably specialize. *Third,* they may attach such importance to the examinations in a single subject as to make it stand, improperly, on a level with the main branches of knowledge.

EIGHT DIVISIONS OF SECONDARY SCHOOL SUBJECTS

These main branches of knowledge are, in our opinion, to be classified as follows: *first,* ENGLISH, including both composition and literature; *second,* FOREIGN LANGUAGES, both ancient and modern; *third,* NATURAL SCIENCE; *fourth,* POLITICAL and SOCIAL SCIENCE, including civics, descriptive economics, and commercial subjects; *fifth,* MATHEMATICS; *sixth,* HISTORY; *seventh,* ART; *eighth,* MANUAL TRAINING, including mechanical drawing and shop-work. By means of instruction in these branches we would give effect to our dual ideal of secondary education. They form the field of secondary education as we would at present bound it.

In the light of our dual ideal it can be seen that any particular subject included under one of these branches can be used to effect either of two purposes. It can be taught as a means to general culture, or it can be taught as offering a reasonable field for the activity of a pupil's dominant powers. According to the view of any particular subject adopted by the college, an examination in that subject should either be offered, or required. But we must here repeat that we hold general culture to be embodied not in knowledge of specific subjects, but in an acquaintance with the characteristics of each of the great departments of knowledge. The only specific subject, therefore, which we would willingly require in college entrance examinations or demand of all secondary schools is English. The reasons for this exception are obvious. Another possible exception may be made in favor of Algebra and Plane Geometry. If these specific subjects are required, it must be upon the ground that in them, and in them only, the essential character of pure mathematics can be displayed to beginners. But we would require, not an examination in physics, but the presentation of a certain amount of science. In Foreign Languages we would require a definite amount of Latin *or* Greek *or* French *or* German *or* Spanish. The equivalence between the amount prescribed in Latin and that prescribed in

German is not here at issue. The principle for which we contend is that of choice. Language, not Latin, should be required. We commit ourselves, therefore, to this opinion: The influence of college requirements is against liberal culture when a test in a specific subject is required in place of an option designed to test the familiarity of the candidate with the elements of a general department of knowledge. It follows that we cannot condemn any secondary school as illiberal on the ground that it does not present this or that specific subject.

Certain qualifying views may now be presented. We would add to our list Physical Training, and would grant to its advocates the possibility that in time the colleges may find it necessary to subject every candidate to a physical examination. We should be glad to see more rational and more searching requirements in this subject adopted in all secondary schools. We should not now advocate, on the other hand, any requirement in Manual Training nor in Art. The elements of these branches should be presented in the primary and grammar schools. High-school instruction in them we are now inclined to place in the category of special instruction, in which any pupil may reasonably choose to exercise his dominant powers; as subjects to be offered under the mastery aspect of secondary education they may therefore be pursued as far as the pupil can go consistently with his acquirement of liberal culture. The college should consequently offer, but not require, examinations in reasonably advanced forms of Manual Training and of Art. This leads us without further discussion to the proposition that the college should offer (not require) advanced examinations in any specific subjects which may reasonably be taught under the mastery aspect of secondary education.

TEST OF EDUCATIONAL VALUES

We have now attempted to present certain principles upon which the college should determine what subjects to require and what to offer. These we have based upon our theory of secondary education. The question of the relative weight to be given to various subjects remains to be treated. In this matter we have a partial concession to make to the formal disciplinarians. The relative educational value of different subjects may be determined upon

four grounds. *First,* a subject may have value because its data can be put to practical use. This sort of value attaches to the multiplication table, and to the data of many vocational subjects. Considered apart from other values it is not of the greatest educational importance. But it is to be noted that it does not vitiate other values; indeed, when combined with them it should add weight to the subject. *Second,* a subject may have value for the ideals it presents. If the pursuit of such subjects as literature and history inculcate sound ethical and aesthetic judgments, strengthen high moral incentives, and exercise the power of moral insight, those subjects are of supreme importance. This sort of value should therefore be taken into account in determining the weight of specific examinations. But this sort of value is hard to convey and harder to test in examination. *Third,* a subject may have conventional value. As we do not wish to be made conspicuous by peculiarities of dress, so we do not wish to be conspicuous because we do not know when Shakespeare lived or who discovered the laws of motion. This sort of value should neither be ignored nor overestimated. *Fourth,* a subject may be of value because it exercises vigorously all the powers its data call into play. This may be called the work-value of a subject. Latin, for instance, exercises the powers called forth by linguistic data to a greater extent than does French. Algebra calls for greater exercise of the power to handle abstract values than does Arithmetic. Chemistry exercises certain powers of observation; History, certain powers of generalization. So much let us grant to the formal disciplinarians; so much, but not more. We see only what we are trained to see. The powers of observation trained in Chemistry will not help us to observe stock-quotations, nor to notice delicate shades in human character. Power to deal with Latin roots will not help us to decide the artistic significance of Mr. Whistler's portrait of Carlyle, nor to frame a judgment upon the taking of rebates. Latin, therefore, may be given greater weight upon this count than French, but cannot be thus compared with Drawing or with Economics. All four of these values should therefore be taken into consideration in determining the weight to be attached to a given subject. But as between different groups of subjects—as between History, let us say, and Mathematics—it is obvious that the fourth sort of value will play a smaller part in

determining relative weights. For History and Mathematics exercise the intellectual powers in very different ways. A great deal of Mathematics, or a little very hard Mathematics will not increase in the pupil the power to deal with historical data nor strengthen in him ethical judgments. The second sort of value must here come into strong play. The scope, kind, strength, and permanence of the *incentives* to activity, and the kind, degree, and permanence of the *power* to think and to execute have been stated by Professor Hanus as the factors in this sort of a problem in values.[4] We fear that in some college decisions these factors have had no effect; the product seems to be the result of multiplying x of work-value by x cube of conventional value.

FAIR REQUIREMENT FOR ENTRANCE TO COLLEGE

What now is the specific outcome of these general principles? It can be presented under two heads. *First,* to hold the secondary school to its duty of supplying a foundation for liberal culture, we would have the college require each candidate to present (1) English, (2) a Foreign Language, ancient or modern, (3) a prescribed amount of Natural Science, (4) a prescribed amount of Political Science, (5) Algebra and Plane Geometry, (6) a prescribed amount of History. It will be noticed that we have prescribed no specific subjects except English and Elementary Mathematics. In the latter case we give the subject the benefit of a doubt which we are frank to confess. But we feel that it cannot then be maintained that a candidate who can satisfy his examiners on the points we have specified has missed the foundations of general culture. How much language, it may be asked, do you advocate? Upon so specific an application all that can be presented is a personal judgment. Under the general principle that enough should be required to assure to the pupil at least the full work-value of every subject, by which we may be certain that he knows the character of the data involved, we should stipulate for Latin, through Caesar; for Greek, through Xenophon; for a modern language, both the elementary and the intermediate examinations, if not the advanced. In Natural Science, we should stipulate Elementary Physics, or

[4] *Educational Aims and Educational Values,* by P. H. Hanus, Macmillan Co.: 1900, pp. 7.

Elementary. Chemistry, or two other elementary sciences. Under this head it may further be noted that the college is called upon to offer examinations of elementary grade in every subject which can properly be studied in a secondary school. In the Political Science field, for instance, there should be a minimum requirement, and additional aspects of the subject as optional. We cannot here review the arguments for these subjects (they are ably presented by President Edmund J. James in the annals of the American Academy of Political and Social Sciences for November, 1897); but it must be clear that a youth unacquainted with the nature of economic data has missed modern culture. Until the instruction in this field has been more clearly formulated it would be difficult for one not an economist to be more definite; but even to the laymen it is obvious that something should be done. The college requirements should cover every specific subject in which a student may properly present himself in satisfaction of the general requirement of liberal culture. *Second,* the college should offer an advanced examination in every subject in which the student may reasonably specialize in the six fields enumerated above and in the two additional fields of Manual Training and of Art. Reasonable specialization has been defined as specialization which does not interfere with the acquirement of general culture. Essentially, this is a question for the individual. The college must strike a fair balance. It seems to us that the traditional requirement in Vergil is all that can be compassed by way of proper specialization in Latin. In modern languages, the usual advanced examination, made somewhat more severe, is all that can be asked. In Natural Science, we should expect to find advanced Physics. Advanced Chemistry seems to be somewhat beyond the possibilities of most secondary schools. Considerations of expediency are not, of course, within the scope of an argument of this kind; we can demand of neither school nor college what it would gladly do, but for lack of means cannot.

NATURE OF COLLEGE ENTRANCE EXAMINATIONS

There is now one further consideration. Of what *kind* shall college examinations be? It has been laid down by the Committee of Ten that "every subject which is taught at all in a secondary school should be taught in the same way and to the same extent to

every pupil so long as he pursues it, no matter what the probable destination of the pupil may be, or at what point his education is to cease." President Eliot has defended this proposition[5] so ably that one is with difficulty forced to admit that he disagrees with the affirmation of a body so authoritative with an advocate so distinguished. A solution of the difficulty may yet be found. At present, however, the point at issue may be illustrated as follows: We wish to give to the students in our commercial high schools a practical knowledge, let us say, of German. We wish to train them to speak the language. In so doing, we do not intend to ignore German literature; we wish, indeed, to have them read as much German literature as we have time for, provided such reading does not prevent us from teaching our pupils to *talk everyday German.* We cannot afford to send them out with a vocabulary composed mainly of poetic forms. It follows, of course, that we cannot teach only Heine, Schiller, and Goethe. But if the colleges insist upon the literary aspect of the language, our pupils are placed at a disadvantage. Very likely they could pass the examination, after a fashion. But that is not the point. The Latin School pupils, without half our allowance for German, could pass it more easily. Is our German not as valuable as theirs? Does it not give our pupils all the virtue of German as a language? We have seen the matter through green glasses; they have seen it through blue. It is so throughout the list. We have taught Physics with an eye to its commercial applications; not superficially, we trust, but as those who would prepare for life by participating in it. What, then, is to be done? As special pleaders, we must advocate a form of examination which tests with exactness the candidate's grasp of the principles involved in the subject, but which does not require him to have a special knowledge of purely academic applications of it. Let us hasten to deny that we wish to avoid getting the full *educational* value out of every subject: we want its work value and its value as conveyor of ideals; but as between a practical value and a conventional value we ask to be given credit for choosing the former.

[5] *Educational Review,* xxx, 4, Nov. 1905, p. 325.

EFFECT OF COLLEGE REQUIREMENTS ON HIGH SCHOOL TEACHING

We have now tried to make a broad application of our philosophy of secondary education and to indicate the way in which we believe the colleges should meet us. Let it not be supposed that we think the problems of secondary education settled, or capable of being settled. It may be that experience will prove that Manual Training is an indispensable element of general culture or that Algebra is not essential. Experience must be our final court of appeal. But we hold that the college which still insists upon Latin, Greek, and Mathematics as the *sine quâ non* of admission is not helping the secondary school to work out its salvation and may possibly be blind to its own. For the college cannot afford to wait until instruction in secondary economics (for instance) is efficient before it puts that subject upon its list of elective examinations. If it will put the subject on the list and set a searching examination in it, good instruction will be forthcoming, and with good instruction the value of the subject as an educational agent is immediately increased. If a college will not train teachers, it may at least create a demand for good teaching.

PRESENT PRACTICE IN COLLEGE ADMISSION

In spite of the fact that we do not profess a well-defined opinion upon every specific problem within the range of this discussion, it will be interesting to note how the present, actual state of college requirements squares with the principles in which we have confessed our belief. The writer has made a study of the entrance requirements of twenty colleges, the results of which he here with some diffidence presents. The colleges selected represent every section of the country except the South; they include all the great universities of the East and West, a number of state universities and several so-called small colleges. Anyone who is at all familiar with college catalogues must surmise that the data gathered form something of a labyrinth. We shall try to make our conclusions clear and we trust we have avoided large inaccuracies. Let it be said by way of explanation that the requirements of these twenty colleges for all general courses have been tabulated, whether those requirements were for general admission, or for a general degree, such as the

A.B., B.S., Lit.B., or Ph.B. Requirements for special courses, such as the courses for engineers, or for teachers, were not tabulated. Requirements for courses in commerce were found to correspond very nearly to requirements for the B.S. degree, but divergences were noted. For the sake of clearness and brevity, however, a single, general tendency with regard to each subject is all that is here presented. This may in every case be taken to represent the most liberal policy with regard to the subject in question. In one university, for instance, advanced Latin is required for admission to the course in Arts, but is alternative with a modern language plus solid Geometry and Trigometry for the course in Science and for the course in Business. In this case we have counted the university among the number which do not specifically require advanced Latin. For the points in which we are now interested are these: first, to what extent is the subject offered for admission to general courses; second, is there a tendency to require it for admission, either specifically or with an option? We are not for the moment interested so much in the possibilty of graduating our pupils into a particular college or into a particular course, as we are in the general effect of college entrance requirements upon the several subjects offered in secondary schools.

It should require but a glance at the figures in the accompanying tables to prove that the ideals for which we have been contending are not universally held by college authorities. The tendency, we are glad to note, seems to be away from hard and fast requirements towards options within a single field. This is a step towards the attainment of the ideal of general culture in secondary schools. But in so far as that ideal depends upon a *wide* offering of elementary subjects, the figures for Manual Training, for Music, for minor scientific subjects and for economic subjects may be instanced as dubious. And the mastery aspect of secondary education receives none too vigorous encouragement: witness, the figures for advanced Physics and for advanced History. The only form of mastery universally recognized is that of mastery (secondary school mastery) in the classics.

The tables presented on pages 37 to 39 show in compact form the present practices in admitting students to college.

TOTAL NUMBER OF COLLEGES—20

Subject	Number of Colleges in Which the Subject Was Specifically Required	Number of Colleges in Which the Subject Was on the Free Elective List	Number of Colleges not Offering any Examination in the Subject	Number of Colleges in Which the Subject Was One of a Group in Which an Option Was Offered. Remarks
ENGLISH	20	..	..	*Two* colleges require composition and offer Literature. One offers Advanced Literature
LANGUAGES				
Ancient				
Latin Elementary	8	4	..	*Eight* colleges offer an option in Languages, with a tendency to give Elementary Latin no more weight than Elementary French
Latin Advanced	6	5	..	*Nine* colleges make Advanced Latin optional. It is rated higher than Advanced Greek but no higher than Advanced German
Greek Elementary	3	6	..	*Eleven* colleges make Elementary Greek optional, usually with Latin, or with an equivalent combination chosen from Latin, French, and German
Greek Advanced	2	7	..	*Eleven*
Modern				
German Elementary	2	4	..	*Fourteen.* The option is usually wide, but is in at least three cases limited to choice between German and an ancient language
German Advanced	..	7	2	*Eleven*
French Elementary	2	4	..	*Fourteen*
French Advanced	..	7	2	*Eleven*
Spanish Elementary	..	3	16	*One*
Spanish Advanced	..	1	19	
NATURAL SCIENCE				
Physics Elementary	5	4	2	*Nine* colleges offer an option between Physics and Chemistry or between Physics or an equivalent amount from other scientific subjects
Physics Advanced	..	2	18	

TABLE—*Continued*

Subject	Number of Colleges in Which the Subject Was Specifically Required	Number of Colleges in Which the Subject Was on the Free Elective List	Number of Colleges not Offering any Examination in the Subject	Number of Colleges in Which the Subject Was One of a Group in Which an Option Was Offered. Remarks
Chemistry Elementary	1	7	3	*Nine.* The tendency is to rank Physics and Chemistry as equivalent, and Botany, Zoölogy, Physiography, etc., as each worth half the value of Physics
Biology	..	3	12	*Five.* Some colleges offer Biology; some separate examinations in Botany and Zoölogy; some both
Botany	..	6	8	*Six*
Zoölogy	..	6	9	*Five*
Geology	..	2	17	*One*
Astronomy	..	4	15	*One*
Meteorology	..	1	19	
Physiography	..	7	7	*Six*
Physiology, Anatomy and Hygiene	..	3	13	*Four*
Psychology	..	1	19	
POLITICAL SCIENCE Civics	..	4	13	*Three.* Civil Government of the United States is often included with the requirements in U. S. History
Economics	..	3	16	*One.* Political Science is here made optional with History or Manual Training
MATHEMATICS Algebra Elementary	18	1	..	*One.* With other Mathematics
Algebra Advanced	1	4	8	*Seven.* With other Mathematics
Geometry Plane	18	1	..	*One.* With other Mathematics
Geometry Solid	9	6	..	*Five.* With other Mathematics
Trigonometry	1	6	6	*Seven.* With other Mathematics

TABLE—*Continued*

Subject	Number of Colleges in Which the Subject Was Specifically Required	Number of Colleges in Which the Subject Was on the Free Elective List	Number of Colleges not Offering any Examination in the Subject	Number of Colleges in Which the Subject was One of a Group in Which an Option Was Offered. Remarks
Analytical Geometry	..	..	19	*One.* Made part of a heavy substitute for Greek, elementary and advanced
History Elementary	16	4	..	Either Greek, Roman, English, American, Mediaeval and Modern European, or a combination
Advanced	..	9	10	*One.* Advanced History seems usually to mean merely *more* history
Manual Training	..	3	16	*One.* With History and Political Economy. Includes various specific subjects as wood-working and blacksmithing
Art Drawing	..	7	13	Freehand and Mechanical
Music Elementary	..	2	18	Harmony
Music Advanced	..	1	19	Counterpoint

EVILS OF THE PRESENT PRACTICE

Have we here found the reason for two real evils in our secondary education? Let us state them for your corroboration from your own experience, and with the statement leave our argument in your hands. We hold the college requirements responsible, namely, for the presence in Latin schools of pupils who never should be in them, who are not fitted for that special form of secondary training. And we hold the college requirements responsible also for the converse condition,—the social stigma (mild if you like, but real) upon the boys in the Manual Training and Commercial High Schools. The harm in one case is educational; in the other, social. But it is done, and will be done, until that happy time when no one who will and who can take it shall be prevented from proving his fitness for higher education.

III

VOCATIONAL STUDIES FOR COLLEGE ENTRANCE REQUIREMENTS

THEODORE DE LAGUNA
Assistant Professor of Education, University of Michigan, Ann Arbor, Mich.

TIMELINESS OF THIS DISCUSSION

The present is certainly a most opportune time for this discussion. A few years ago the general scheme of college entrance requirements seemed pretty well defined. Today we are awakening to our ignorance and are open to suggestions from all quarters. The growing recognition of music as a proper subject for entrance examinations is evidence in point. It may be that in this particular case the recognition was not wholly wise; that the cause of American music has far less to gain thereby than its friends have hoped; that preparatory music is likely to be to an even greater extent a fiasco than preparatory English has been. But it is enough for us to note that the recognition has been asked and given, and that collegiate authorities have in so far expressed their willingness to accept, for matriculation, subjects that are far removed from the lines of the traditional requirements. We may, therefore, attack the various questions connected with our subject without feeling that they have been answered for us in advance.

AN APPARENT INCONSISTENCY—ITS SOURCES

We note, at the outset, a certain apparent inconsistency in the demands of those who are urging the recognition of these new subjects. On the one hand, they are unreserved in declaring that the secondary school should not be degraded into a mere preparatory school; that it has a work of its own well worth doing for its own sake, without regard to the small percentage of students who afterwards go to college; that every stage of the educational process should be directed with a view to the present actual development of the pupil, and not with a constant squint at the supposed require-

ments of a future stage. Such phrases as "preparatory English" and "preparatory mathematics" are therefore resented. The work of the high school is felt to be no more preparatory to that of the college, than the work of the college is to that of the professional school. On the other hand, while thus asserting the independence of the secondary school, they are just as outspoken in the conviction that the colleges ought to accept the newer school-studies for a generous part of their entrance requirements—that is to say, that these studies also ought to be made "preparatory" subjects and thus be placed beneath the patronage and somewhat dictatory control of the collegiate authorities.

This apparent contradiction seems to have a twofold origin, partly in matter-of-fact and partly in educational theory. The fact of the matter is that the secondary school is in certain important respects essentially a preparatory school. The abrupt discontinuity of its work with that of the lower grades, and the intimate connection with that of the college freshman and sophomore years, are ample historical evidence of this. The high school has gotten its curriculum from above, not from below—and not only its curriculum but its ideals, its measures of value, its standards of accuracy and effectiveness. However small the proportion of boys who go to college, it is what is expected from these few that tends to set the mark for the rest; and wherever this work is departed from, it is almost invariably by a descent. Furthermore, the recent great improvement in secondary education throughout the country has been largely due to demands from above. The colleges were bravely struggling to rise, and because they could not rise alone they had to persuade the middle schools to follow them in the ascent.

I. HIGH SCHOOLS AS PREPARATORY SCHOOLS

For these reasons and in these respects, our high schools are essentially preparatory schools. To be sure, their growth would have been impossible without local support, and this support would not have been given if the people of the towns and villages had not felt the need of something more than an elementary education for their children. The extraordinary development of the high school system of California, with a minimum of state encouragement and without a particle of state financial aid, well illustrates this feeling.

In a village of fifteen hundred inhabitants, with, say, a thousand more within a circle of five miles radius, I have there seen a high school of one hundred twenty-five pupils—one in twenty of the total population; meaning that almost every boy and girl of proper age was in the school. It was not a rich community, and the high school tax was a fearful burden. The salaries of the four teachers ranged from one hundred twenty-five to seventy-five dollars per month. Surely that school was entitled to a large measure of self-respect and self-dependence. But an examination of its curriculum showed that it was entirely modeled upon the entrance requirements of the University of California; and the proud boast of the school was that it had been fully accredited by the university examiners. Situated as it was in the southernmost county of the state, this school had a course of study that was as nearly as possible like those of the San Francisco and Oakland high schools. No single study had any marked relation to the peculiar needs arising in such an environment. Thus, although the school was supported by an earnest public sentiment, its whole character was fixed, the direction of all its endeavors was determined, by extraneous influences. For very few of its graduates could ever hope to go to college.

The instance which I have cited is simply an extreme type, to which hundreds of others are no doubt closely parallel. It may serve to exemplify the fact that the American high school, as at present generally constituted, stands for nothing except an aspiration; that its curriculum is not an organic whole, but a conglomerate of what the colleges have found it possible or convenient to pass down to it; that it represents no actual social need; and that the public which supports it must, therefore, to a considerable extent, judge of its efficiency simply by its success in preparing students for college.

This is not the place to take account of the various more or less successful efforts which are being made to remedy this condition of affairs. Our present concern is with the facts as they are, and with the sort of public sentiment that they have occasioned. It is, I think, not difficult to see why collegiate recognition of a high school subject is felt to be so overwhelmingly important. It confers a badge of respectability, a title to public consideration and support.

EXCEPTIONAL POSITION OF THE VOCATIONAL STUDIES

It must, however, have occurred to the reader, that what we have been saying cannot pass without exceptions—notably music and the vocational studies. Of these it is conspicuously true, that they *do* stand in a very immediate relation to actual social needs, and that the public has a very swift and tolerably sure means of estimating the skill with which they are taught. Logically speaking, therefore, these studies have not the same need of collegiate recognition as most of the others. But sentiment does not always run in logical channels. When the sentiment has once been established, that the study which leads to college is more estimable than the one which does not, both teachers and students in the latter line must suffer from the general impression that the work they are doing is either nonessential or even of distinctly inferior grade. Needless to say, however, thoroughly good work in subjects which have an immediate and visible relation to social welfare cannot long remain without public recognition of their importance. In spite, therefore, of all possible prejudice against them, the vocational studies are not in any desperate need of the honor of being accepted for college entrance credits—though it is easy to see why the honor should be desired for them.

II. CLAIM OF THE HIGH SCHOOLS TO INDEPENDENCE

I undertook to give two reasons for the seemingly contradictory demands of the advocates of these vocational studies; on the one hand that secondary instruction be organized primarily for its own ends and not as a mere preparatory course; and on the other hand that the colleges accept the work thus organized as adequate preparation for their own work. A few of the facts bearing on the matter have now been briefly noted, and it remains to take account of the part which has been played by certain current educational theories. And here one is tempted to smile at the swift irony of fate, which has turned one of the firmest dogmas of recent conservatism into a war-cry of the new liberalism. A dozen years ago the conviction prevailed that the best preparatory course constituted at the same time the best possible secondary education for those who could go no farther; and school administrators were advised to use

this as a principle of economy—for which purpose, indeed, it was admirably suited. But today the maxim is simply converted, so as to read: The best secondary education, considered in itself, is likewise the best preparation for any further education that may chance to follow it.

From the point of view of formal logic, the meaning of the proposition is unchanged; but its implications are none the less radically transformed. For, in the first place, it is implied, that the practical experience of the school man is to be given precedence in its own domain, over the college man's theories as to what he has a right to expect from youth. This means the conferring of a dignity and responsibility upon the high school teacher that makes his office as worthy as any in the whole realm of education. And, in the second place, the converted proposition implies that the judgment of the experienced school man shall be accepted at its face value by the colleges, the only check put upon that judgment being the actual collegiate record of the students received from the schoolmaster's hands.

If the new maxim is still a lie, it is, at any rate, a truer lie than the old one. It ought to be true. Give the high schools freedom from politics and a relatively permanent and truly professional personnel, and there is no reason why it should not be true. From this point of view, the apparent contradiction which we have previously noted is easily explained. That the school men should demand at once independence and recognition is not intrinsically absurd.

VOCATIONAL STUDIES NOT EXCLUDED BY COLLEGE PREPARATION

But both the old maxim and the new are open to very obvious criticism upon other grounds. For secondary education, or even the best secondary education, is not an unambiguous term. The college has its own definite work to do, and that work presumably requires a certain amount of more or less definite preparation. On the one hand, the college is not the only institution for which the secondary school may prepare. It may prepare for the farm, the shop, the draughting-room, the office, or for various technical schools of higher grade; and the definite prerequisites for these various spheres of work are by no means identical. The assertion, then, that the best secondary education is at the same time the best

preparation for college, requires for its validity the proviso that the prerequisites for college work have not been slighted.

A candid examination of the premises, however, shows that this objection has not all the pertinence that might be supposed. Let us take the entrance requirements of the Literary Department of the University of Michigan as an example. The first feature that strikes our attention is the slenderness of these requirements. They amount to only fifteen units—that is to say, three recitations a day throughout the four years of the high school course; while good high schools commonly require four recitations a day, and, under conditions of overpressure, this number is frequently raised to five. The high school can thus easily accomplish far more than is required; and the superfluous energy may be devoted either to enabling their graduates to enter college with advance credit, or to giving them a more diversified secondary education. At the same time, the weaker schools find it a sufficient task to cover the allotted ground. After the meagerness of the requirements, we are, in the second place, struck by their indefiniteness. Only seven units (English, algebra and geometry, and physics) are definitely prescribed. Two years' study of a language (which must not be Greek) are also required. The remaining six units are freely elective from a considerable range of topics—history, ancient and modern languages, and various natural sciences. Thus the student may enter college without any history, or without a working knowledge of any language, or without any natural science other than physics. Furthermore, of the subjects actually prescribed, it is to be noted, that some forty per cent of the matriculants make no further use of more than a petty fraction of the mathematics they have acquired, that the same is true of physics, and that the preparatory English is so confessedly a failure that the one required course in the college is elementary rhetoric.

Like most unpolished facts these cut in various directions. On the one hand, they further minimize the necessity of giving entrance credits for work in vocational subjects. The well organized high school can easily, if its administrators so desire, devote four or five periods a week to such studies throughout the entire course, and still contrive to meet the college entrance requirements. Even a distinctly commercial or industrial school is likely to turn out men

who with a summer's coaching, can make up the necessary number of credits for matriculation. On the other hand, if the proposed innovation is thus seen not to be imperatively called for, the burden of proof is somewhat lightened for those who would prove it to be feasible. For all that they need to show is that the studies in question possess such culture value as to warrant their displacing other elective subjects (Greek, history, or biology, for example) in the early stages of a liberal education. Putting the two conclusions together, we may say that the proposed measure is not one of relief for the high schools, but of strictly collegiate policy, the sole question arising for discussion being whether it is in the interest of the college thus to encourage that sort of training in its matriculants.

Even this question is sufficiently complicated. We might be tempted to throw it aside with the remark, that no doubt different institutions, subject to different conditions, would probably have to settle it differently. That is no doubt true, as it is always true of questions of policy. There are, however, some general principles involved, which seem to me worthy of a brief consideration in this place.

RECOGNIZED VALUE OF THE VOCATIONAL STUDIES

The old antithesis of "liberal" and "vocational" is one that can no longer be maintained by students of education. It had its origin in a false—that is to say, impermanent—conception of the relation between work and leisure, which rested, in turn, upon an equally false conception of the essential distinctions between classes of men. It was Aristotle—the same observer who held that some men were born to be masters, and some to be slaves—that first gave clear expression to the sentiment, that, though leisure and business are both necessary, the former is altogether the more worthy both in itself and as an educational aim. Time, which is so much wiser than any single observer, has shown that the ennoblement of leisure is impossible without an equal ennoblement of business—that any attempt at the former apart from the latter is bound to issue either in a wretched dilettanteism or an almost equally contemptible "polite learning." The education that trains for work may be as truly liberal —i. e., tending to make a man free in body and soul—as an education which provides for the decent employment of leisure; and it can

descend to no depths of illiberality beyond those to which the latter has often sunk.

THEIR CHARACTERISTIC DEFECT

In discussing, therefore, the advisability of allowing matriculation credits for work in vocational studies, we may, I think, take it for granted that such studies are capable of affording a very high degree of culture. This need not blind us to the fact that they are liable to characteristic weaknesses. A useful end does not make a study illiberal, but a sentiment, that nothing is to be learned which does not have a direct bearing upon the end in view, most decidedly does; and such a sentiment is apt to be roused in young minds by an exclusive emphasis upon the specific practical applications of knowledge. Technology is every whit as worthy an object of study as science; but a course in any branch of technology, which does not presuppose a thorough grounding in the subsidiary pure sciences is likely to be a sorry sham. That is why, for example, textbooks in pedagogical psychology are so wretchedly poor, whenever they do not take for granted a previous schooling in general psychology. The same is true of the relation of instrumental drawing to geometry, and of agriculture to chemistry, botany, and entomology. If educational experience has proved anything, it has proved this,—that if science is to be studied to any real advantage, it must be studied first of all for its own sake—or *as if* for its own sake; that is to say, impartially, with breadth of view, and with an eye not simply to "practical" details but to the general principles which comprehend and explain the details. To attempt to plunder a science of just what is needed for a particular purpose, is to doom oneself to failure. Again, in the conduct of the technical instruction itself, it is important, both from the educational and the practical point of view, that the main emphasis be placed, not upon the convenient empirical formulae that can be applied without much critical thought, to the more common emergencies of every-day experience, but upon the reasons for the formulae. That is why in the training of teachers—to speak of the profession that is best known to most of us—the pedagogy of methods and devices has had to be supplemented, or even to be replaced, by the history and theory of education. That by following an opposite course, technical education

sacrifices its own highest ends is, I say, unquestionable; but it is its besetting sin. If, therefore, entrance credits were allowed in vocational subjects, the college might well observe with especial care the spirit in which the instruction was carried on—whether mere skill was aimed at or something more.

RELATION OF THE COLLEGE TO VOCATIONAL STUDY

There is this further consideration that may in many cases militate against the advisability of the proposed measure. The college itself gives no direct preparation for any vocation, except, somewhat anomalously, for that of the teacher and that of the consulting chemist. It does, however, aim at providing a general training in the sciences and humanities, such as will serve as a basis for the future acquirement of the arts both of business and of leisure. In other words, the college stands for a lengthened adolescence, the ultimate object of which is to ensure a more fully ripened manhood. As such, it presents a marked contrast to the various technical schools of the university, which introduce their students to vocational studies as promptly as possible after receiving them from the preparatory schools. Now the commercial and industrial high schools stand for an exactly opposite principle—the need of fitting vast numbers of boys and girls for the business of life, with all convenient speed. A lengthened youth is a luxury which all cannot afford; and even the technical school of college grade is beyond the reach of the great majority. These high schools have thus a work to do which yields to no other in social importance; but it is a work that is designed not as preparatory, but as supplementary, to the work of the college. The boy who enters a commercial high school, for example, does not do so with the intention of afterwards going to college; but he enters it just because he lacks either the means or the ambition of going to college, and wishes to be fitted for a position as promptly as possible. To be sure, he may afterwards change his mind, and determine to go to college at any cost. But in that case the few slight obstacles in his path will not seriously deter him.

It must not be forgotten, that the first two years of the college course are, as a usual thing, more closely connected with the classical, literary, or scientific course of the high school than with the last two years of the college course itself. This is tacitly recognized

in some colleges, by the very different requirements imposed upon students during the first two and during the last two years; it is openly proclaimed in others; and even where it is formally denied, the changing character of the instruction attests the fact. If we mean by a secondary education *such an introduction to the general elements of the various branches of modern culture as is necessary to prepare the student for intelligent specialization,* then our high schools and academies certainly do not cover the ground. That used to be the task of the college, but it now accomplishes something more than this. Before the student completes his undergraduate course, he is able, under proper guidance, to do a certain amount of really intensive work. But that is not during the first two years. These years really belong to secondary education; and if either the problem of the requirements for the bachelor's degree, or the problem of college entrance requirements is to be intelligently solved, they must be treated together, and treated with a full consciousness both of the twofold character of college work and of the relative continuity of the high school period and the freshman and sophomore years. Thus the proposal to accept work in vocational lines for college entrance is closely parallel to a proposition to permit college freshmen and sophomores to elect a certain amount of work in affiliated technical schools. This, too, is by no means an inherently ridiculous proposition, but it is worth noting that the drift of university sentiment is against it. Thus, for example, in the various "compound" courses that have recently been organized, entitling the graduate to two degrees—the literary-law, for instance—the technical work is not usually begun until after two years of strictly academic work. So, also, the departments of pedagogy do not usually receive pupils before the junior year. The same motives would presumably apply with even greater force to the requirements for the preparatory course.

RELATION OF THE PRESENT PROBLEM TO THAT OF THE BACCALAUREATE DEGREE

I said just above that the college entrance problem was really inseparable from that of the baccalaureate degree. With this principle in mind, let us refer once more to the University of Michigan entrance requirements. Attention has already been called to their very limited

significance, and the fact was used as an argument for the recognition of vocational subjects—if so little is essential, why not let these subjects, as well as any others, go to make up the meaningless total? It is quite possible, however, that some doubt may have been raised in the reader's mind, as to the wisdom of these requirements; and I dare say that if they represented a permanent condition of affairs very serious criticism would have to be passed upon them. But nothing is more obvious than that they represent a transition in the relations between school and college, a provisional compromise between various interests whose proper equilibrium has not yet been reached. For these entrance requirements must be understood in connection with the system of free election which has been established in the college; they had to be made as indefinite as possible in order that the student might be able to proceed in all possible directions thereafter.

It is noteworthy, that after the enthusiasm with which the elective system was adopted by the leading colleges of the country, a reaction has recently set in against it. It seems not likely that the system will be altogether abandoned anywhere, but modifications and limitations of a corrective character have in many quarters been adopted or at least prominently advocated. Thus the College of Arts and Sciences of Cornell University has recently adopted regulations which limit in various ways the student's choice of about one-third of the units required for graduation; the faculty, however, remaining "loyal to the principle of the election of studies." (President's Report, 1905–1906, p. 26.) It has been felt that the students need guidance—and, indeed, none have felt this more keenly than the students themselves. Ask any college senior, and he will tell you that the elective system is no doubt the best in itself, in that it offers the greatest opportunities of self-improvement to the student; but that the average freshman or sophomore does not know his own needs or intentions well enough to make a wise use of his opportunities.

To the student of education, certain observations upon this whole movement and counter-movement are now beginning to be fairly obvious. First, the colleges of the country are fairly committed to the free elective system; without it they cannot fulfill the functions which have grown upon them. Secondly, the limita-

tions upon free election which have been generally proposed are wholly inadequate to correct the undoubted weaknesses of the system. If the regulations are made rigid enough to ensure the interests of the majority, they at once become oppressive to an important minority. If they are so light as to encumber no one, then they serve to curtail only the grossest and most obvious abuses. Thirdly, the students entering college are not prepared to take proper advantage of the elective system. That requires, for one thing, an appreciation of the correlation of studies, such as the freshman can scarcely be expected to have. Fourthly—and this I conceive to be the heart of the whole matter—the adoption of the elective system by the colleges logically implies a far more extensive preparation than is now anywhere exacted, or than can be exacted from high schools with their present four years' course.

In a word, the college of the future must have behind it high schools offering a well-rounded and adequate secondary education. Such a course would itself provide for a considerable amount of election; but its requirements would assure an introduction to all the chief departments of intellectual culture—let us say, languages and literature; history and political economy; mathematics; physics, chemistry, biology, and geology; and psychology. In such a scheme, certain important vocational studies would assuredly hold an honored place; if not as a part of the requirements—for many students might profitably postpone that sort of work till a later period—then as urgently recommended electives. For it is not to be denied that these studies have a peculiar moral value, quite as estimable in its way as the scholar's devotion to pure science—a moral value which is shown in the habits of manly endeavor which they not uncommonly induce.

To a school offering a course of this character, the problem of college matriculation credits would be of very little concern. The colleges would accept its graduates as unquestioningly as they now receive students from each other or from reputable normal schools. And in its own community it would be a wonderful civilizing power. It would do for immense numbers what the college of a generation ago did for the comparatively few, and do it much better. That this is what the American high school is coming to, we can now scarcely doubt. The advanced credits which the better organized schools

are now able to secure for their graduates who enter college are but an indication of the drift of things. The lopping off of old and useless excrescences from the work of the elementary school would save at least a year, and very possibly two years, for the lengthened high school course; and the better articulation of the work of the lower and middle schools may mean almost as great a gain, if not in time, then in efficiency. The problem in this regard, as it today confronts us, is almost purely one of administrative detail.

Thus I feel sure that the advocates of the present measure are certain to gain their real end in the not distant future, not through the recognition of vocational studies by the colleges, but as they have gained similar ends in the past—through the development of the high schools themselves.

CONCLUSION

As matters stand, however, I do not see that this particular measure is to be very widely recommended. Some colleges, no doubt, will find it to their advantage to allow the desired entrance credits; but in general there appears to be very little occasion for the innovation, and very little good to be derived from it. Three classes of high school students would be affected. First, there would be those who elected these studies without intending to follow the vocations to which they led, but who hoped for an easier or more congenial method of getting into college. Such students might or might not be disappointed; but in either case they would almost certainly fail of the discipline of the vocational studies, in addition to losing that of the theoretical studies. At any rate, these young ladies and gentlemen could have no very large claims upon our consideration. Secondly, there would be those who intended eventually to make use of what they had learned, but to go to college first. In their case, the presumption would be that the vocational studies might better be postponed until a more adequate theoretical basis had been obtained. Exceptions would occur, but I doubt whether legislative provision ought to be made for these. Thirdly, there would be those who originally hoped for nothing better than to get a position when they graduated, but who later on found the means, or awoke to the ambition, of going to college.

Such students would, of course, be helped by the proposed measure; but as previously intimated, the obstacles which they have at present to overcome are not serious.

And when we deliberately face the question which was announced above—whether the vocational studies possess a culture value that warrants their displacing such subjects as history or biology in the earlier stages of a liberal education—we must, I think, answer it in the negative. If there were time for all things, we should not have to choose; but in so far as the time is limited we feel that the theoretical subjects should take precedence. To put the proposition in naked terms, that in education all the theoretical should precede all the practical, is to commit an evident absurdity and to invite obvious criticism. But it must not be forgotten, in the first place, that, so far as the moral discipline of contact with the fundamental economic problems of life is concerned, fate kindly provides that for a goodly number of our students—their life is not all one of pure theory; and, in the second place, that the entrance requirements as they stand are not so high as altogether to preclude a certain amount of voluntary vocational work in the high school. Taking all things into consideration, I for one feel driven to the conclusion, that for the high school boy or girl who is to go to college, it is more important to lay a broad foundation of theoretical knowledge that shall serve as a basis for his future general civic usefulness, than to devote himself at once to the direct preparation for a vocation. Great as is the value of the vocational subjects, I cannot regard it as equivalent—for such persons, at such a period—to that of the purely theoretical subjects. They will have time hereafter to learn to better advantage the practice of their vocation.

IV

VOCATIONAL STUDIES FOR COLLEGE ENTRANCE REQUIREMENTS

PRINCIPAL VIRGIL PRETTYMAN
Horace Mann High School, Teachers College, New York City

DEFINITION OF TERMS

"Shall vocational studies be accepted for entrance to college?" Before entering upon a discussion of the question it seems necessary to define "College" as the educational institution which confers upon its graduates the first bachelor's degree—A.B., B.S., or Ph.B. By vocational studies we mean those studies, which, either by their very nature or because of the point of view from which they are taught, tend to prepare directly for specific efficiency in handicraft, business, or profession. For example, manual training and freehand and mechanical drawing for the trades; commercial geography, history of commerce, history of the United States with especial reference to industrial aspects, commercial law, banking, and finance, and industrial chemistry for the various commercial pursuits.

The question under discussion, then, is: Shall those studies which prepare directly for specific efficiency in handicrafts, commerce, and profession be accepted for entrance to those collegiate courses at the close of which the first academic degree is granted?

WHAT COLLEGE ENTRANCE REQUIREMENTS SIGNIFY

A study of the history of the enlargement of the college entrance requirements during the past two centuries fails to reveal the fact that subjects have in the past been placed on the list for college entrance because of their definite relation to the understood function of the college. New studies have frequently been tried in the secondary schools and because they have there proved their efficiency and because the schools have been insistent in their demands they have finally been accepted by the colleges. As early as the year 1800 our academies taught English grammar, geography,

algebra, geometry, natural philosophy, astronomy, music, composition, logic, but our colleges introduced these subjects at a later date. On the other hand, certain studies have been imposed by the colleges upon the schools as subjects proper for the preparation for college work. But there seems to have been no underlying principle which has determined the question of proper preparation for college.

Commissioner of Education Brown in "The Making of Our Middle Schools" says, "the idea of liberal culture was the dominant note of both academy and college education in the nineteenth century." This idea of liberal culture perhaps determined then more largely than any other educational procedure during the nineteenth century. The twentieth century will by no means give up this idea of liberal culture, but it bids fair to add the ideas of efficiency and service as influential factors in educational procedure.

If liberal culture, efficiency, and service are the educational ideas to guide us it behooves us to question seriously whether the college entrance requirements of today permit the secondary schools to train in the broadest way for culture, efficiency, and service. It has become more or less a custom for us to look to Harvard University for leadership in educational matters. The Harvard College entrance requirements today render it impossible for the graduates of our best manual training and commercial high schools to gain admission and yet who will claim that such graduates are less well trained than the graduates of our preparatory courses? It may be claimed that these graduates may enter the scientific schools, but this is not our contention. Is there any good reason why a graduate of one of our best secondary schools should be denied admission to the course leading to the bachelor's degree?

In other words, what do the college entrance requirements signify? What do our colleges want in the way of maturity, knowledge, and training in order that a young man may pursue college courses with profit? It seems to the writer that the college entrance requirements as stated in the announcements of our great educational institutions are but symbols of the training and maturity required for the pursuit of college courses. Harvard College practically requires a minimum of seven studies for entrance but permits no freshman to pursue seven studies at one time. Moreover not one of the subjects required for entrance, except English, is required

in any of the years of the college course. In other words the subjects required for entrance are not considered primarily as preparatory to the pursuit of the same studies in college. Hence we must conclude that the college demands of those desiring to enter its courses a certain modicum of knowledge of a number of subjects and more than this it demands a certain degree of maturity, a habit of work, and a facility in mental application.

Now, I presume, no one would claim that Harvard's list of options includes all those subjects the pursuit of which may give the maturity, the habit of work, and facility in mental application demanded. On the other hand, this list might reasonably be criticized as being somewhat one-sided. The schools are endeavoring to train in their students the power of self-expression and by no means limit the effort to training in verbal expression. Through the work in music power of tonal expression is developed; through freehand and mechanical drawing the power of graphic expression is developed; through the various lines of shop work the power of constructive expression is developed. In other words, our schools are trying to develop the complete power of self-expression.

ENTRANCE REQUIREMENTS AT PRESENT ARE ONE-SIDED

Few of our colleges require more than the power of verbal expression as measured by the requirements for admission, and in this respect the tests for admission are one-sided. Dean Woodward of Washington University says, "The requirements for entering upon college or university work should be general fitness and not familiarity with a particular subject; general strength to undertake new work in a new field." It is evident then that our list of subjects which may be presented for college entrance might be somewhat broadened.

But what does the college demand of a subject before it is accepted as an entrance requirement?

1. It shall possess sufficient content;
2. It shall be systematic;
3. It shall be well taught;
4. It shall be both informational and disciplinary.

The secondary school makes the same demands of all studies admitted to its program of studies but in addition demands that

subjects shall bear some relation to the environment of students and shall train for efficiency. Why is Greek practically relegated to the University as a subject of study? It certainly fulfils the fourfold requirement of the college—it has sufficient content, is systematic, is well taught, and is both informational and disciplinary, but it relates only slightly to environment and does but little in fitting its devotees for service and efficiency. Hence, it is gradually disappearing from the program of study of secondary schools.

The closer articulation of school and college seems to demand that the college shall enlarge its scheme of requirements so as to include those subjects which do train for efficiency and service. The most characteristic weakness in the subjects ordinarily required for entrance to college is the entire absence of application to things and affairs of daily life; e. g., our geometry and algebra as taught are pure abstractions and the student finishes these subjects with little or no appreciation of their practical applications. The vocational studies, on the other hand, are in their very nature practical and bear the most practical relations to the life about us.

PRESENT LIMITED RECOGNITION OF VOCATIONAL SUBJECTS

There is at present great diversity among our colleges in permitting certain vocational studies to be offered for entrance. Harvard College permits drawing and music; Leland Stanford, drawing, music, manual training; University of Missouri, drawing; Columbia, music, drawing, manual training. Unfortunately our women's colleges are least progressive in enlarging the scheme of entrance requirements. So far as the writer has been able to discover no woman's college accepts either domestic science or domestic art as an entrance subject. Our secondary schools throughout the country are in agreement in admitting manual training, drawing, music, and commercial branches to their program of study. Our secondary schools have proved beyond doubt the value of these vocational studies as elements in the training of boys and girls. Since our schools are in agreement as to the value of vocational studies and since some colleges already accept these studies for entrance it is only a question of time when any graduate of one of our best secondary schools will find it possible to enter any college of the land on the subjects he has studied in his secondary school.

It was in the days of Timothy Dwight, the elder, that natural science was looked upon as perhaps a valuable subject of study for some students but by no means necessary for the student preparing for college. But natural science was admitted to the program of study in secondary schools and having proved its value was eventually required for college entrance. The attitude toward the vocational studies is similar to that toward natural science in the days of Dwight. One by one subjects which have proved their efficiency have been accepted for admission by the colleges. Our colleges must eventually accept for admission any subject which has proved itself worthy as an element in training boys and girls of the secondary school. Judgment may differ as to what certain studies do accomplish; it may take years to secure agreement as to educational values, for there is no necessity for haste in educational procedure, but eventually our higher institutions will be compelled to accept those subjects which in the judgment of secondary-school teachers, school officials and parents have proved their efficiency in training for service and life in the community.

Believing that the testimony of men actively interested in schools giving training in vocational lines would be of value in this discussion a note of inquiry brought forth many interesting and valuable statements. In reply to the inquiry, "Do you consider the graduates of your school capable of pursuing with profit a college course leading to the bachelor's degree?" the following testimony was received from representative headmasters. Principal Frank Rollins, The Stuyvesant High School, New York City: "I am very glad to say that a considerable number of our boys are planning to take such courses and I am confident that they will do college work with profit." Mr. C. W. Permenter, headmaster of the Mechanic Arts High School, Boston, Mass.: "Many graduates of the Mechanic Arts High School make a creditable record in the Massachusetts Institute of Technology and the Lawrence Scientific School of Harvard University. There is no good reason for thinking that many of these men would not pursue successfully courses leading to the degree of A.B., if such courses were open to them." Mr. William L. Sayre, principal of the Central Manual Training High School in Philadelphia, says: "The graduates of this school are admitted on their diploma to the college departments of the Uni-

versity of Pennsylvania, Lehigh University, Lafayette College, and (with the exception of English) Cornell University. Their records in these institutions show that they stand shoulder to shoulder with graduates from other high schools and that in many cases take high honors. I have reason to believe therefore that our graduates could successfully take up college courses leading to a bachelor's degree." Such testimony at least shows that school men have confidence in the kind of training afforded by vocational studies as fitting for college entrance.

ENLARGED USEFULNESS OF THE COLLEGE AND HOW REALIZED

Colleges no longer exist primarily for the training of leaders. The increase in attendance at our degree-granting institutions has been enormous in the last quarter of a century. Our college clientele is no longer such a carefully selected lot of young men and women. The class of people who were a generation ago satisfied with secondary-school training for their children are today seeking collegiate training for their sons and daughters. The next twenty-five years will witness a continuance of this enlargement of attendance at our higher institutions, if our colleges meet the demands the public will surely make upon them; and the public will demand more and more a training suited to those who are not destined either by nature or environment for the traditional professions.

For too long a time our schools made provisions only for what psychologists describe as "men (boys or girls) of thought." Boys and girls of "feeling" and "action" have been the problems in the school. But today our schools are meeting the needs of all three types.

Our college entrance requirements, however, still test the boys and girls too largely on one side—thought. The future will demand more and more that college opportunities shall be open to the "feeling" and "action" type of boy and girl as well as to the "thought" type. And in order that such may be the case credit will be given by the college to the value of the so-called vocational studies pursued in the secondary schools. Our country seems destined to become a country of college-trained men and women.

If my statement that the college exists no longer simply for the training of a select few but rather for the upbuilding of the masses

of our population; if my statement that certain vocational studies —drawing, music, manual training, cooking, sewing, commercial geography, history of commerce, industrial chemistry, commercial law—have proved their efficiency in the training of boys and girls of secondary-school age; if my statement that the college must eventually accept for admission those subjects which have proved their worth in the secondary schools; if these three statements are correct, then what credit shall the college assign to each of these subjects in the general scheme of requirements? How shall the balance be struck between the vocational studies and the traditional subjects required by the colleges? On the Harvard basis of twenty-six points for entrance it would seem a fair thing to assign credits as follows:

Shop work (four years)	4 points
Freehand drawing	2 points
Industrial history of the United States	2 points
Commercial geography	2 points
Domestic science	2 points
Domestic art	2 points

The above list is simply suggestive as indicating the proper method of procedure in striking the balance between the traditional college entrance subjects and the vocational studies.

When our colleges accept for entrance subjects which have proved their worth in the secondary schools, then will our schools cease to be mere "fitting schools" and the best thought of school men will be given to a consideration of the training best suited to boys and girls of secondary-school age.

V

COLLEGE ENTRANCE CREDITS FOR VOCATIONAL SUBJECTS

W. J. S. BRYAN
Principal Central High School, St. Louis, Mo.

INTRODUCTION—THE SITUATION

The importance of thorough preparation of applicants for admission to college is not questioned by any observant teacher of a secondary school. Experience has taught that lack of preparation is not only discouraging to the ill-prepared student who attempts to do advanced work, but detrimental to others who are obliged to work with him; some of their time is spent unprofitably and his development is hindered if not wholly prevented. The success of class instruction depends upon proper grading. Not to recognize this fact, not to secure proper conditions in this respect, is to invite failure.

The growing insistance of schools of medicine and law upon adequate preparation of applicants shows plainly the present trend of educational thought in this direction. The demand for uniform college entrance requirements heard on all sides has arisen not from criticism of existing requirements, but from the desire to satisfactorily prepare applicants for admission to all colleges by a course of instruction acceptable to all rather than by many courses respectively satisfactory to each.

The diversity of requirements has resulted from local conditions and special emphasis laid by different colleges upon certain subjects or topics deemed of peculiar importance by these colleges, and it has been perpetuated by the isolation of the colleges from each other and from the great number of public high schools which have come into existence in the development of the public system and have framed their courses of study to meet the needs of the children of the public schools and to articulate closely with the work already done by them.

SECONDARY EDUCATION IN ITS RELATION TO ELEMENTARY AND HIGHER

There have been two points of departure in educational matters, the primary school and the college. The college demanded preparation for entrance and created the preparatory school. The stability of our form of government, the development of natural resources, and the growth of manufactures and commerce requiring directive intelligence necessitated the extension of the course of public instruction beyond the primary grades, and the high schools were multiplied.

The establishment of state universities at the end of the course of public education had as its logical presupposition the articulation of primary and higher institutions through the medium of the secondary schools. It is for the primary school to receive the children from the home and to train them to reasonable proficiency in elementary subjects. For this training eight years have been found requisite under ordinary conditions. The high school receives the children at this stage of their development and carries their education forward for a period of four years, disclosing to the responsive mind the various lines of human endeavor and achievement. It is for the college to further train such young men and women as have made good use of their twelve preparatory years and have shown by the work done that they can profitably undertake more advanced work. There should be no chasm between the college and the four-year high school with adequate equipment and thorough instruction.

DETERMINATION OF STANDARDS FOR ADMISSION TO COLLEGE

The state universities in the earlier days of their establishment because of the necessity of articulation with existing high schools of low standard have been obliged to modify their requirements of admission, but this condition is undesirable and calls for speedy amendment by increased efficiency of high schools. And such has been the history of the changing relation between high schools and state universities everywhere, a record of provisional articulation resulting from temporary adjustment of needs to attainment, with reasonable increase of demands from year to year on the part of the state university and steady increase of efficiency of high schools to meet these reasonable requirements.

Just what subjects should be required for entrance is an unsettled question and must remain so until education becomes a science and all phases and processes are completely understood. Some institutions still adhere very closely to original positions, others have modified their demands to suit changed conditions. The fact that is most potent for change is the increase in the number of those who desire to attend college without any intention of following a profession, who recognize the value of college training for leadership in any line of service, and have become convinced that higher education is profitable for both material and spiritual things, for both living and making a living. This deserved recognition and practical commendation of the work of the higher institutions is one of the most encouraging signs of the growth in intelligence of individuals and communities; but this increased attendance of men and women with widely diverging plans and conceptions will no doubt have a tendency to change ideas as to the course of study to be furnished before and after entrance, in preparation and in participation.

The evolution of a science of education will be conditioned by the determination of the effect upon the development of the mind of each study pursued or proposed. Too long teachers have worked in the dark as to the nature of the minds to be developed and as to their reaction upon the subjects of study. They have taught language, mathematics, history, science, rather than boys and girls, young men and young women, through these media.

Scientific pedagogy has for its condition precedent the scientific observation and recording of the mental phenomena resulting from the study of the various subjects of the curricula. Little has been done in this direction. Diligent search fails to discover such records of observations made by competent observers under suitable conditions. There are teachers of every subject taught who have a reasonably thorough and comprehensive knowledge of it and are successful in imparting instruction to those they strive to teach, but there are few consciously scientific teachers who are aware of the possibilities and are working steadily and confidently toward expected educational result.

In recent years educators have begun to recognize the importance of a study of childhood and youth, that the process of development and the natural sequence of the phases of growth may be noted

and may receive the consideration necessary to secure the best results in education. Next in order should come the careful investigation of the effects the study of each subject produces under given conditions upon the evolution of the individual. When this has been ascertained it will be possible to frame with assurance courses of study that will prepare for useful, satisfying lives.

The widening of the field of education through the enrichment of the courses pursued has resulted from changes in the needs and requirements of youth as individuals living in a growing civilization. Recognizing the changes in the environment of young men and women, educators have sought to prepare them to meet existing conditions and to improve the opportunities offered.

PRESENT STATUS OF VOCATIONAL STUDIES FOR COLLEGE-ENTRANCE CREDIT

Wisely conservative and unwilling to jeopardize the interests of those committed to them, teachers of youth have made innovations only when they were convinced of their pedagogic value. Thus the sciences forced their way into the curricula of the schools and higher institutions until they were given full recognition and approval. Thus also manual training has received recognition and the vocational subjects such as commercial arithmetic, bookkeeping, stenography, typewriting, commercial law, commercial geography, and commercial history are asking consideration.

An examination of the catalogues of twenty state universities of the central, northern, and western states and of an equal number of endowed colleges shows that of the entire list only five allow any credit for commercial arithmetic; five, for bookkeeping; two, for stenography; two, for typewriting; three, for commercial law; three for commercial geography; one, for history of commerce. Of the same list of higher institutions eleven mention manual training among the subjects that may be offered in satisfaction of entrance requirements.

Of the colleges and universities that offer higher commercial courses, as far as I have been able to ascertain, not one accepts any vocational subjects for entrance or recognizes these subjects in its admission requirements.

If these subjects are to be recognized as affording training for

UNIVERSITY OF CALIFORNIA

subsequent work in higher institutions, evidently it will have to be demonstrated that they are equivalent in disciplinary power to some of the subjects already included in the list of those that may be offered in satisfaction of entrance requirements. They will have to do what the sciences have done, namely, prove their fitness as preparatory subjects for the development of intellectual power to profitably pursue advanced work in college and university.

WHAT CREDIT-VALUE SHOULD BE ASSIGNED VOCATIONAL SUBJECTS?

On the supposition that vocational subjects have educational values, what would be a reasonably proportionate allowance in a scheme of entrance requirements in view of the values assigned to the several subjects now included in the list of those accepted by the various universities and colleges? Taking the universities of Harvard, Dartmouth, Chicago, Michigan, Illinois, and Ohio as typical and averaging the percentage of entrance requirements that may and must be furnished by various lines of study, I find that

English may furnish 20%, must furnish 20%
History may furnish 20%, must furnish ——
Mathematics may furnish 25%, must furnish 20%
Languages may furnish 40%, must furnish 15%
Science may furnish 30%, must furnish ——

There is practical uniformity in the valuation of English and mathematics. History varies from 0% to 13% as a required subject and from 14% to 27% as an elective subject. Science varies from 0% to 13% as a required subject and from 10% to 50% as an elective. Foreign languages vary from 0% to 20% as required subjects and from 27% to 53% as electives.

The number of periods spent on vocational subjects, estimating the periods given to bookkeeping and typewriting as laboratory periods would suggest ½ or 1 credit for bookkeeping, 1 credit for stenography and typewriting, ½ credit for commercial law, ½ credit for commercial geography, ½ credit for history of commerce, in all 3 or 3½ credits, if one credit represents 180–200 periods of work requiring preparation.

If the high schools of St. Louis may be taken as a norm, the vocational subjects occupy 1500 periods out of 4400 periods or 1140

periods out of 4040 periods. The four-year commercial course consists of

800 periods of English,
300 periods of history,
600 periods of science,
400 periods of mathematics,
400 periods of foreign language,
400 additional periods of a foreign language or of drawing,
100 periods of civil government,
100 periods of economics,
120 periods of penmanship,
80 periods of business arithmetic,
300 periods of bookkeeping,
300 periods of stenography,
300 periods of typewriting,
100 periods of commercial law,
100 periods of commercial geography,

in all 4400 periods of work, of which 1500 periods are given to vocational subjects, or 1140 periods out of 4040 periods, if bookkeeping, penmanship, and typewriting are estimated as subjects that do not require preparation.

The work in the commercial course not vocational would entitle the graduate to

4 credits for English,
2 credits for language,
2 additional credits for language or
1 credit for drawing,
2 credits for mathematics,
1 credit for history,
3 credits for science,

nearly enough credits for admission to most colleges.

The vocational subjects take the time which in the college scientific course is given to other subjects, namely science, 200 periods; mathematics, 480 periods; language, 600 periods; history, 100 periods; for which six credits ordinarily would be allowed.

Work in civics and economics is frequently accorded ½ credit

for each subject. The work in commercial geography and history of commerce would seem very similar to work done in history in which the commercial development of various countries receives considerable attention. The work in penmanship presumably no one would expect to be given credit and that in commercial arithmetic would hardly be considered apart from bookkeeping in which it finds its application.

It remains to consider the claims of bookkeeping, stenography, and typewriting.

Bookkeeping is essential to business transactions of which it is the record, but it does not require or develop a high order of power. Its principles are few and once mastered are not difficult of application. The system and accuracy demanded are valuable acquisitions and the classification of each transaction trains the power of judgment within certain narrow limits. It is doubtful, however, whether the time spent upon it could not be better employed were it not for its practical value. If the salaries paid for such services are an index of the estimation of the business world of the grade of ability requisite, its rank is not high.

Stenography as a system of symbols for the rapid recording of speech and thought has extensive practical use. Moreover, its demands upon the intelligence of the user cultivate alertness and quickness of apprehension and call into exercise power of concentration and attention; while, the transcription of stenographic notes exercises the memory and trains in comprehension and expression of thought. Nevertheless, were it not for the facility its mastery affords, I should question the wisdom of devoting to its study the time required for its acquisition.

Apart from stenography, typewriting would be only a form of manual dexterity. Memory is exercised and practice in forms of expression is acquired. Spelling, capitalization, punctuation, paragraphing, are impressed, and neatness, accuracy, and quickness are taught by constant repetition but the time spent in learning typewriting would not be well spent, if it were not for the facility it affords.

REPORT OF THE SECRETARY

I. Minutes of Meetings Held at Louisville, Ky., Feb. 26, and 28, 1906

Monday, Feb. 26.—An open meeting had been arranged for to be held in the Warren Memorial Church. Here over six hundred people gathered and listened from eight o'clock until ten to the discussion of George P. Brown's *Yearbook* on the study of English. The following members gave short, pointed, stimulating discussions. All excepting Mr. Brown, the author, were limited to ten minutes each, and occupied the full time:

George P. Brown, Bloomington, Ill.
Pres. L. H. Jones, Michigan State Normal College, Ypsilanti.
Prof. George M. Forbes, Rochester University, Rochester, N. Y.
Prof. W. S. Sutton, University of Texas, Austin.
Supt. Stratton D. Brooks, Boston, Mass.
Prof. Samuel T. Dutton, Columbia University.
Pres. Charles McKenny, State Normal School, Milwaukee, Wis.
Prof. Reuben Post Halleck, Boys' High School, Louisville, Ky.
Miss Ada Van Stone Harris, Supervisor Kindergarten and Primary Education, Rochester, N. Y.
J. Stanley Brown, Township High School, Joliet, Ill.
F. Louis Soldan, Superintendent of Instruction, St. Louis.

Each speaker discussed a specific, limited phase of the subject.

This meeting was considered one of the best the Society ever held. It certainly was a notable meeting in that the large audience gave uninterrupted attention until ten o'clock, at which hour President Dexter ended the discussion by declaring an adjournment.

Although this meeting was a great popular success, and like all such meetings, was highly gratifying to writers and speakers, yet it is doubtful if a strictly scientific body can fittingly lend itself to popular demonstrations. Such a meeting always takes the time and absorbs the opportunity for a meeting at which members should get down to close and severe study and exchange of views on the problem before the Society.

Wednesday, Feb. 28.—At four o'clock P. M., about forty active members gathered in the parlors of the First Christian Church, Pres. Edwin G. Dexter presiding.

Minutes of Asbury Park meetings were approved as written in the *Yearbook.*

Moved, That the Secretary get a stenographic report of discussions at meetings of the Society and print the same in the minutes.

Two main objections were urged against this motion: first, it would involve too great an expense for printing; and second, such reports might often be of questionable value.

After two amendments the motion was passed as follows: That members of the Society submit to the Secretary abstracts of their discussions for printing in the *Yearbook* when requested by the Executive Committee.

President Dexter ruled that discussion of Mr. Brown's monograph, "The Teaching of English in Elementary and High Schools" be taken up first, and that at five o'clock he should call for business, unless the Society instructed otherwise.

Discussion was continuous for one hour, yet very few of the main propositions or problems of Mr. Brown's study were touched upon. This suggests the value of planning for a consideration of the main points in a paper, and allotting to each point its proportional part of the available time.

The following members took leading parts in the discussion: Homer P. Lewis, Stratton D. Brooks, Charles A. McMurry, W. J. McConathy, Thomas H. Briggs, Jr., John W. Cook, Ossian H. Lang, L. H. Jones, Francis G. Blair, and others.

Hereafter when recording the names of new members the items of biographical information called for in the application blanks will be given for more complete identification. The following persons were elected to Active Membership at Louisville:

Thomas H. Briggs, Jr., A.B., Wake Forest (N. C.) College, and the University of Chicago; instructor in English, Eastern Illinois State Normal School, Charleston, Ill.

Elizabeth H. Bunnell, A.B., Mount Holyoke Seminary, A.M., Columbia University; teacher of English, Training School for Teachers, Brooklyn, N. Y.

Ira I. Cammack, B.S., Earlham College; principal of Central High School, Kansas City, Mo.

John W. Carr, A.B. and A.M., Indiana University; superintendent of instruction, Dayton, Ohio.

Albert S. Cook, A.B., Princeton University; superintendent of schools, Baltimore County, Md.

Emma C. Davis, supervisor of primary education, Cleveland, O.

Mary E. Doyle, superintendent of training, State Normal School, Superior, Wis.

Lida B. Earhart, student in Columbia University; formerly training teacher in State Normal School, Whitewater, Wis.

A. C. Fleshman, M.S. and A.M.; professor of pedagogy and training, State Normal School, Slippery Rock, Pa.

J. Montgomery Gambrill, Baltimore Po'ytechnic Institute, assistant state superintendent of education, Baltimore, Md.

Herman C. Henderson, A.M., University of New Brunswick, and University of Chicago; professor of pedagogy, State Normal School, Milwaukee, Wis.

Patty S. Hill, head of Louisville Kindergarten Training School, Louisville, Ky.

H. H. Holmes, B.S., instructor in mathematics, Central High School, Kansas City, Mo.

Horace H. Hollister, A.B. and A.M., Iowa State University; high school visitor, University of Illinois, Urbana, Ill.

Benj. J. James, A.M., Northwestern University, Chicago University; superintendent of schools, Waukesha, Wis.

Charles H. Judd, A.B., Wesleyan University, Ph.D., University of Leipzig; assistant professor of psychology, and director of summer school, Yale University, New Haven, Conn.

W. H. Kirk, A.M., Baldwin University; superintendent of schools, East Cleveland, O.

Maria Kraus-Boelté, academic training in Germany and England; principal Kraus' Seminary for Kindergartners, Hotel San Reno, Central Park, New York, N. Y.

W. J. McConathy, principal Normal School, Louisville, Ky.

C. M. McDaniel, B.S. and A.M., Wabash College; superintendent of schools, Hammond, Ind., and principal Winona Lake Summer School.

Irving I. Miller, Ph.D., Rochester University and University of Chicago; professor of psychology, State Normal School, Milwaukee, Wis.

Bertha Payne, head kindergarten teacher, School of Education Chicago, Ill.

The nominating committee, consisting of J. H. Van Sickle, E. F. Buchner, F. E. Bolton, Charles McKenny, and J. Stanley Brown, reported the following nominations:

For President—Reuben Post Halleck, Louisville, Ky.

For Secretary-Treasurer—Manfred J. Holmes, Normal, Ill.

For Members of Executive Committee—W. S. Sutton, of the University of Texas, and Stratton D. Brooks, Boston, Mass.

The report was adopted and the nominees declared elected.

President Dexter read a communication from the President of the American Association for the Advancement of Science inviting the National Society for the Scientific Study of Education to affiliate with that organization. President Dexter then explained the probable advantages of becoming associated with such a scientific society, and how it would affect the constitution of the National Society. After considerable discussion the invitation was declined, and the President instructed to make appropriate response to the invitation.

The following report of the Committee on renaming the National Society for the Scientific Study of Education was next received.

To the National Society for the Scientific Study of Education:

Your committee appointed to make recommendations concerning the renaming of this Society, submitted a report at the Asbury Park meeting recommending the adoption of the name, "The National Society of Education." Because the question of affiliation with the American Association for the Advancement of Science was under consideration, it was deemed wise to defer final action and the question of renaming was referred back to the committee for further consideration to report at the February meeting, 1906.

Your committee wishing to secure a fuller expression of preferences than was possible at the time of making its first report, sent out additional inquiries to members with the following results:

Out of a total of thirty-three preferences, fifteen were in favor of the name "The National Society of Education," six favored the "American Education Society," and thirteen were scattering.

Your committee still holds that because of brevity and the retention of the larger part of the present name of the Society that the name "The National Society of Education" should be adopted. Inasmuch as the preferences of members, as far as expressed, were largely in favor of the name, your committee recommends that this Society be renamed "The National Society of Education."

Respectfully submitted,

H. E. Kratz
F. G. Blair
W. S. Sutton
Committee on Renaming

It was moved and seconded to adopt the report of the committee on renaming. After some discussion, the motion was voted on and lost.

Motion was then made and seconded to adopt the name "The Herbart Society." This motion was amended giving the Executive Committee discretionary power as to the use of the word "National" or "American" preceding the word "Herbart." The motion as amended was passed by a large majority.

This motion to adopt the name "The Herbart Society" was not offered as an amendment to the constitution, it was not so interpreted by the presiding officer, no announcement was made (in fact no note was taken) as to whether the majority was the two-thirds majority required to amend the constitution; therefore, since a change of name involves a change in the constitution, the Executive Committee did not feel authorized nor warranted in introducing any change of name until the action of the Society should meet the requirements of the constitution.

Dr. C. A. McMurry suggested a valuable line of work the Society might encourage, namely, the formation of local clubs for the study and discussion of the *Yearbooks.*

II. Status and Prospectus of the National Society

1. *Historical note.*—The National Society for the Scientific Study of Education is the lineal successor to the National Herbart Society which was organized at the Denver meeting of the National Educational Association in 1895. The National Herbart Society was born on the one hand of the serious need of advancing the status of scientific method in education in our country, and on the other hand of the progressive energy of a small group of the younger American educators. It was one of several characteristic movements in the history of education in the United States during the last decade of the nineteenth century. This decade marks a veritable renaissance in American education, and it would be a biased or superficial historian who should say that all the various phases of this renaissance were not essentially indigenous to America. The high-school movement was a vigorous and prolific outburst rather than a gradual growth because the need of secondary education for all the people had grown much more rapidly than provision for or even recog-

nition of such need. The reselecting and reorganizing the elementary course of study to more faithfully and adequately meet the requirements of modern life and the needs of the children was another conspicuous phase of this awakening. As a logical result of these two movements came the demand for better instruction and the more adequate provision for the education and training of teachers. It was in this decade that the child-study movement had its overflow, and when seen in the light of its true causal relations must be recognized as a highly important phase of this educational renaissance. The great improvement in methods and effectiveness of the work of the National Educational Association was a response to the educational situation. Some of the most progressive and aggressive young men of the country determined to equip themselves to meet the educational situation with the highest possible degree of effectiveness. Happily they truly discerned that the vital core, the very heart, of the educative process is the unitary action of learning and teaching; and that the art of teaching rests upon principles or laws that inhere in the nature of the learner and the subject-matter. They therefore concentrated their study upon the conditions and mental processes involved in learning, and upon the selection and organization of the content of the course of study. Some of these men went to Germany to get what help they could, while some stayed at home. Those who went abroad seem to have been deeply impressed and inspired by the educational doctrines of Johann Friedrick Herbart, who in a very true sense was the father of the scientific study of education. On returning to America these men applied themselves with serious devotion and great vigor to improvement in our courses of study and methods of teaching. They inaugurated a propaganda of educational ideas that for serious enthusiasm and popular contagion can hardly be paralleled. The chief studies, discussions, and writings focussed upon such central, organizing topics as "the doctrine of interest;" "the law of apperception;" "the selection and correlation (or concentration) of subject-matter of the course of study"—"the culture epoch theory" being a chief theme here;" "the formal steps of instruction;" "the ethical aim of education," etc. Now because these topics were also the central and fundamental ones in Herbart's pedagogy, the men who propagated the ideas in America under the Herbartian terminology, came to be

called Herbartians. They did not object to the distinction thus given, and when they finally organized themselves for greater effectiveness it was natural, logical, and appropriate for them to adopt the name they did. The first name was "The Herbart Society for the Scientific Study of Teaching."[1] The second form of the name was "The National Herbart Society for the Scientific Study of Education."[2] This second form of the name continued until 1899. For convenience the explanatory part of the name was omitted in everyday use.

The leaders of this national movement for a serious, intense, and scientific study of vital and pressing educational problems are well represented by the first "executive council," which continued in office from 1895 to 1899. They were Charles De Garmo, president, Nicholas Murray Butler, John Dewey, Wilbur S. Jackman, Elmer E. Brown, Frank M. McMurry, Levi Seeley, C. C. Van Liew, and Charles A McMurry, secretary. It must not be inferred that all the names in this now noted list of American educators belonged to the "Herbartian" category. Both the personnel and the clientele of the Society from its inception show that the movement was broader than what is denoted by the term "Herbartian;" but the Society as a whole was for some years characterized and dominated by the stirring enthusiasm and aggressive leadership of those who were closely identified with the "Herbartian" topics. The first three *Yearbooks* show that the studies and discussions were almost entirely on the so-called "Herbartian" topics. The *Fourth Yearbook* shows a breaking up and a broadening out; while the *Fifth Yearbook* and its Supplement show that the thought has returned to the educational situation in its wider extent and its newer meaning. Then follows a year (1900) for which there is no record of any activity of the Society. No meetings were held and no *Yearbook* issued.

In February, 1901, the National Herbart Society for the Scientific Study of Education was reorganized with somewhat extended plan and purpose. The name remained the same excepting that the word "Herbart" was omitted and the explanatory part was included in the everyday use of the name.

2. *Purpose and method of the National Society.*—During its first stage the National Society "was organized for the aggressive dis-

[1] Preface to *First Yearbook*. [2] *First Yearbook*, p. 204.

cussion and spread of educational doctrines," and it desired "to draw into its membership all teachers, students of education, and parents who wish[ed] to keep abreast of the best thought and discussion." The purpose, further, was "to give to the doctrines of Herbart, as of other educators, a thorough study and criticism;" and "to test all theories by the standard of practical usefulness." Some weeks before the N. E. A. meetings it published a *Yearbook* that contained one or more monographs on important educational topics carefully worked out by specialists in the field discussed. It was supposed that members would study the *Yearbook* before the meetings, thus preparing for able and profitable discussion. These books were also widely disseminated through the trade channels. The chief characteristic purposes of the Society in its first stage, therefore, were the writing of monographs on important educational topics, and the discussion of these monographs by members of the Society at their regular general meetings and by members organized as local round tables.

During its second stage the original purposes of the Society have been continued, but there are some distinctive characteristics added; e. g., the topics cover a greater scope of vital educational principles and problems; each active member of the Society is supposed to be seriously and patiently at work upon the study of some problem arising out of his immediate work, and that he is seeking the solution of his problem by a scientific method of procedure; thus the Society endeavors to help elevate the scientific character of both the personnel and the work of the teaching profession; it calls for expert inductive studies of prevailing conditions as a guide to intelligent treatment and improvement of these conditions; from time to time it calls for reports from active members indicating the specific problem under study, the method of proceeding in the study, and the results obtained; it is planning to issue a series of monographs collating and organizing the fundamental data—the conditions, processes, laws, and guiding principles—underlying the science and art of education; it seeks to cultivate a spirit of professional co-operation and reduce to a minimum the spirit of commercial competition. Its organ for all these purposes is the *Yearbook,* supplemented by circular letters and other communications, and close and careful discussion at the meetings. Some of these

projects are still on probation, and it is yet to be seen whether a society with such standards and purposes can be maintained by the teaching profession. I have not the slightest doubt that such a society can be maintained. There is great need for it, and there is a sufficient body of men and women who earnestly desire such an organization; what is needed is an organizing genius who can take hold of the situation and bring about the results desired.

III. Announcements to Active Members

The Chicago meetings, Feb. 25–28, 1907.—Owing to the postponement of the San Francisco meetings, two topics will come before the Society at Chicago.

First, Prof. Ellwood P. Cubberley's monograph on "The Certification of Teachers" will be the basis for discussion for Monday evening, Feb. 25. This meeting will be held in the Auditorium Hotel, beginning at 7:30 P. M. Look for placard notice.

On Wednesday, P. M., 4:00 o'clock, the report of the committee on college entrance credit for vocational courses will be the basis of discussion. The place for this meeting will be announced by placard in the hotel lobby.

Supplementary meetings may be held if the Society so decides.

At the Wednesday session the regular annual business meeting will be held. The items of business so far as known at this writing are—

Election of officers.

A consideration of the policy and method of the Society. Should we issue more than one leading study a year? To what extent should the *Yearbook* contain reports from active members? Shall the *Yearbook* be an open forum for the thoughtful and dignified presentation of differences of opinion on questions that come before the Society? Shall there be established a new standard for Active membership? The right sort of standard could be made suggestive and stimulating to the younger members of the profession. This Society ought to be of such high character that membership in it will be a truly worthy goal for the more professionally ambitious of the young men and women who enter the field of education. Should not the standard for election to Active membership soon be something like this?—No person to be eligible until he or she has

undertaken the study or investigation of some educational problem (either theoretical or practical) and brought it to some more or less definite conclusion. The evidence of such serious professional and scientific spirit could be considered a qualification for Active membership.

Ought not the secretaryship and the editorship to be divided between two persons?

Shall the National Society print in its *Yearbook* the reports of committees of other societies especially when those reports are, or are to be, printed elsewhere? Shall the committee plan of study and investigation be carried on?

To the above, other items of business that members may suggest will be added.

IV. Financial Statement

M. J. Holmes, Secretary-Treasurer, in account with The National Society for the Scientific Study of Education for the year ending Dec. 31, 1906:

Debits—		
To cash balance per statement Dec. 31, 1905	$153.96	
To membership fees and dues for 1906	430.00	
To sales of Yearbooks prior to July, 1906	22.61	
		$606.57
Credits—		
By printing and stationery	$204.65	
By office help and supplies	98.25	
By postage and express	43.26	
By traveling expenses	35.10	
By telephone and telegraph messages	2.80	
		$384.06
Balance due the National Society		$222.51

The University of Chicago Press in account with the National Society for the Scientific Study of Education (items shown by memorandum bills and statements):

Debits—			
Jan. 1 to Mar. 31, 1906	$ .75		
April 1 to July 31, 1906	3.05		
August 1 to Dec. 31, 1906	330.21		
		$334.01	
Credits—			
Balance due the National Society per statement Dec. 31, 1905	$ 37.25		
Jan. 1 to Mar. 31, 1906	84.34		
April 1 to July 31, 1906	77.88		
Aug. 1 to Dec. 31, 1906	204.93		
		$404.40	$70.39
Balance standing to credit of the Society Dec. 31, 1906			$292.90

ACTIVE MEMBERS OF THE NATIONAL SOCIETY FOR THE SCIENTIFIC STUDY OF EDUCATION

Zonia Baber, School of Education, Chicago, Ill.
Frank P. Bachman, Normal College, Ohio University, Athens, Ohio.
William C. Bagley, State Normal College, Dillon, Mont.
C. M. Bardwell, Superintendent of Schools, Aurora, Ill.
R. H. Beggs, Principal Whittier School, Denver, Colo.
Ezra W. Benedict, Principal of High School, Warrensburg, N. Y.
Francis G. Blair, Superintendent of Public Instruction, Springfield, Ill.
Frederick E. Bolton, State University of Iowa, Iowa City, Iowa.
Richard G. Boone, Editor of "Education," 80 Bruce Ave., Yonkers, N. Y.
Eugene C. Branson, President State Normal School, Athens, Ga.
Thomas H. Briggs, Jr., State Normal School, Charleston, Ill.
Sarah C. Brooks, Principal Teachers Training School, Baltimore, Md.
Stratton D. Brooks, Superintendent of Schools, Boston, Mass.
George P. Brown, Editor "School and Home Education," Bloomington, Ill.
John F. Brown, University of Wyoming, Lamarie, Wyo.
J. Stanley Brown, Superintendent Township High School, Joliet, Ill.
Martin G. Brumbaugh, Superintendent of Schools, Philadelphia, Pa.
W. J. S. Bryan, Principal Central High School, St. Louis, Mo.
William L. Bryan, President Indiana University, Bloomington, Ind.
Edward F. Buchner, University of Alabama, University, Ala.
Elizabeth H. Bunnell, Training School for Teachers, Brooklyn, N. Y.
Jesse D. Burks, Principal City Training School, Albany, N. Y.
W. H. Burnham, Clark University, Worcester, Mass.
B. C. Caldwell, President Louisiana State Normal School, Natchitoches, La.
Ira I. Cammack, Principal Central High School, Kansas City, Mo.
John W. Carr, Superintendent of Schools, Dayton, Ohio.
Clarence F. Carroll, Superintendent of Schools, Rochester, N. Y.
C. P. Cary, State Superintendent, Madison, Wis.
Charles E. Chadsey, Assistant Superintendent of Schools, Denver, Colo.
P. P. Claxton, University of Tennessee, Knoxville, Tenn.
David E. Cloyd, Principal High School, Spokane, Wash.
Alexander B. Coffey, William and Mary College, Va.
Albert S. Cook, County Superintendent of Schools, Baltimore, Md.
John W. Cook, President State Normal School, De Kalb, Ill.
Flora J. Cooke, Francis W. Parker School, Chicago, Ill.

F. W. Cooley, Superintendent of Schools, Evansville, Ind.
William I. Crane, Superintendent of Schools, Marshalltown, Ia.
Ellwood P. Cubberley, Leland Stanford University, Stanford University, Cal.
Frank M. Darling, 6532 Perry Ave., Chicago, Ill.
William M. Davidson, Superintendent of Instruction, Omaha, Neb.
Emma C. Davis, Supervisor of Primary Education, Cleveland, Ohio.
W. S. Dearmont, President State Normal School, Cape Girardeau, Mo.
Charles De Garmo, Cornell University, Ithaca, N. Y.
John Dewey, Columbia University, New York, N. Y.
Edwin G. Dexter, University of Illinois, Urbana, Ill.
Richard E. Dodge, Columbia University, New York, N. Y.
F. E. Doty, Secretary Civil Service Commission, Madison, Wis.
Mary E. Doyle, State Normal School, Superior, Wis.
Augustus S. Downing, Education Department, Albany, N. Y.
Charles B. Dyke, 961 Tenth St., Boulder, Colo.
Lida B. Earhart, 1230 Amsterdam Ave., New York, N. Y.
Gertrude Edmund, Lowell Training School, Lowell, Mass.
A. Caswell Ellis, University of Texas, Austin, Tex.
William H. Elson, Superintendent of Schools, Cleveland, Ohio.
Frederic E. Farrington, University of California, Berkeley, Cal.
David Felmley, President Illinois State Normal University, Normal, Ill.
Frank A. Fitzpatrick, Manager American Book Co., Boston, Mass.
A. C. Fleshman, Kentucky State College, Lexington, Ky.
George M. Forbes, Rochester University, Rochester, N. Y.
J. M. H. Frederick, Superintendent of Schools, Lakewood, Ohio.
J. M. Frost, Superintendent of Schools, Muskegon, Mich.
J. Montgomery Gambrill, Assistant Superintendent of Education, Baltimore, Md.
Charles B. Gilbert, 1170 Broadway, New York, N. Y.
Wilbur F. Gordy, Superintendent of Schools, Springfield, Mass.
Maximilian P. E. Groszmann, Director the Groszmann School, Plainfield, N. J.
W. N. Hailman, Chicago Normal School, Chicago, Ill.
Reuben Post Halleck, Principal Boys' High School, Louisville, Ky.
Rufus H. Halsey, President State Normal School, Oshkosh, Wis.
Cora M. Hamilton, State Normal School, Macomb, Ill.
Paul H. Hanus, Harvard University, Cambridge, Mass.
Ada Van Stone Harris, Supervisor Primary Education, Rochester, N. Y.
W. H. Hatch, Superintendent of Schools, Oak Park, Ill.
Josephine W. Heermans, Principal Whittier School, Kansas City, Mo.
Herman C. Henderson, State Normal School, Milwaukee, Wis.

J. W. Henninger, 6433 Monroe Ave., Chicago, Ill.
Cheesman A. Herrick, Central High School, Philadelphia, Pa.
Albert Ross Hill, University of Missouri, Columbus, Mo.
Patty S. Hill, Kindergarten Training School, Louisville, Ky.
Florence Holbrook, Principal Forestville School, Chicago, Ill.
Horace H. Hollister, University of Illinois, Urbana, Ill.
H. H. Holmes, Central High School, Kansas City, Mo.
Manfred J. Holmes, Illinois State Normal University, Normal, Ill.
Wilber W. Howe, Superintendent of Schools, Whitehall, N. Y.
Walter Ballou Jacobs, Brown University, Providence, R. I.
Benjamin B. James, Superintendent of Schools, Waukesha, Wis.
Jeremiah W. Jenks, Cornell University, Ithaca, N. Y.
Lewis H. Jones, President State Normal College, Ypsilanti, Mich.
Charles H. Judd, Yale University, New Haven, Conn.
Grant Karr, Teachers Training College, New York, N. Y.
John A. H. Keith, State Normal University, Normal, Ill.
Calvin N. Kendall, Superintendent of Schools, Indianapolis, Ind.
John R. Kirk, President State Normal School, Kirksville, Mo.
W. H. Kirk, Superintendent of Schools, East Cleveland, Ohio.
Henry E. Kratz, Superintendent of Schools, Calumet, Mich.
Maria Kraus-Boelté, Principal Kraus' Seminary for Kindergartners, Hotel San Reno, Central Park, New York, N. Y.
Ossian H. Lang, Editor "The School Journal," 61 East 9th St., New York, N. Y.
Isabel Lawrence, State Normal School, St. Cloud, Minn.
Homer P. Lewis, Superintendent of Schools, Worcester, Mass.
Livingston C. Lord, State Normal School, Charleston, Ill.
Charles D. Lowry, District Superintendent of Schools, Chicago, Ill.
G. W. A. Luckey, University of Nebraska, 1439 R. St., Lincoln, Neb.
Herman T. Lukens, State Normal School, California, Pa.
E. O. Lyte, President State Normal School, Millersville, Pa.
John A. MacVannel, Columbia University, New York, N. Y.
Frank A. Manny, Superintendent Ethical Culture School, 33 Central Park West, New York, N. Y.
David R. Major, Ohio State University, Columbus, Ohio.
William H. Maxwell, Superintendent of Schools, New York, N. Y.
Arthur M. McCallum, Superintendent of Schools, Austin, Tex.
W. J. McConathy, Principal Normal School, Louisville, Ky.
C. M. McDaniel, Superintendent of Schools, Hammond, Ind.
Charles McKenny, President State Normal School, Milwaukee, Wis.
Charles A. McMurry, Acting-President, State Normal School, California, Pa.

Frank M. McMurry, Columbia University, New York, N. Y.
I. C. McNeill, President State Normal School, West Superior, Wis.
G. R. Miller, State Normal School, Greeley, Colo.
Irving E. Miller, State Normal School, Milwaukee, Wis.
William A. Millis, Superintendent of Schools, Crawfordsville, Ind.
J. F. Millspaugh, President State Normal School, Los Angeles, Cal.
Will S. Monroe, State Normal School, Westfield, Mass.
Ernest C. Moore, University of California, Berkeley, Cal.
George A. Newton, Superintendent of Schools, Greenville, Tex.
Theodore B. Noss, President State Normal School, California, Pa.
M. V. O'Shea, University of Wisconsin, Madison, Wis.
Simon N. Patton, University of Pennsylvania, Philadelphia, Pa.
Bertha Payne, School of Education, Chicago, Ill.
George D. Pickles, State Normal School, Natchitoches, La.
Rosalie Pollock, Supervisor Primary Schools, Salt Lake City, Utah.
R. R. Reeder, Hastings-on-Hudson, New York.
J. F. Reigart, Yonkers, N. Y.
Emily J. Rice, School of Education, Chicago, Ill.
C. R. Richards, Columbia University, New York City.
Stuart H. Rowe, Brooklyn Training School for Teachers, Brooklyn, N. Y.
James E. Russell, Dean of Teachers College, New York, N. Y.
Myron T. Scudder, State Normal School, New Platz, N. Y.
Levi Seeley, State Normal School, Trenton, N. J.
Homer H. Seerley, President State Normal School, Cedar Falls, Iowa.
Burgess Shank, State Normal School, Valley City, S. Dak.
James J. Sheppard, Principal High School of Commerce, New York, N. Y.
Herbert M. Slauson, Superintendent of Schools, Ann Arbor, Mich.
Waite A. Shoemaker, President State Normal School, St. Cloud, Minn.
David E. Smith, Columbia University, New York, N. Y.
Gerard T. Smith, Superintendent of Schools, Peoria, Ill.
Davis S. Snedden, Leland Stanford University, Stanford University, Cal.
Z. X. Snyder, President State Normal School, Greeley, Colo.
Louis F. Soldan, Superintendent of Instruction, St. Louis, Mo.
Edwin D. Starbuck, Earlham College, Richmond, Ind.
Wm. E. Stark, Principal Ethical Culture High School, New York, N. Y.
John K. Stableton, Superintendent of Schools, Bloomington, Ill.
W. S. Sutton, University of Texas, Austin, Tex.
Henry Suzzallo, Leland Stanford University, Stanford University, Cal.
Joseph S. Taylor, District Superintendent of Schools, New York, N. Y.
Edward L. Thorndike, Columbia University, New York, N. Y.
Charles H. Thurber, Editor Ginn & Company, Boston, Mass.

A. W. Tressler, University of Wisconsin, Madison, Wis.
C. C. Van Liew, President State Normal School, Chico, Cal.
James H. Van Sickle, Superintendent of Schools, Baltimore, Md.
Dwight B. Waldo, President Western State Normal School, Kalamazoo, Mich.
Elmer W. Walker, Superintendent of School for the Deaf, Delevan, Wis.
Sarah J. Walter, Hampton Institute, Hampton, Va.
A. S. Whitney, University of Michigan, Ann Arbor, Mich.
John J. Wilkinson, Elmhurst, Ill.
J. N. Wilkinson, 928 Union St., Emporia, Kan.
L. E. Wolfe, Superintendent of Schools, San Antonio, Tex.

14 DAY USE
RETURN TO DESK FROM WHICH BORROWED

EDUCATION-PSYCHOLOGY
LIBRARY

This book is due on the last date stamped below, or
on the date to which renewed.
Renewed books are subject to immediate recall.

7 DAY USE SUMMER	DURING SESSIONS
NOV 2 1965	
OCT 29 RECD -11 AM	
MAY 8 1970	
JUN 1 2 1970	
MAY 15 REC'D - 1 PM	
JUN 10 1979	
REC'D MAY 24 '79 -12 M	
JAN 2 2 2001	

LD 21–50m-12,'61
(C4796s10)476

General Library
University of California
Berkeley

U.C. BERKELEY LIBRARIES
C005684430